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EPA FINAL REPORT

Purpose: Federal Facility PA Review

Site: Kaiser Eagle Mountain
Eagle Mountain, California
Riverside County

Site EPA ID Number: CA0000053090

Report Prepared By: John P. Zwierzycki

Report Reviewed By: Nate Johnson

Review/Concurrence: William E. Deutsch

Document Control No.: 62316.38.33.882 05.a.1

Report Date: August 19, 1994

Submitted To: Carolyn Douglas
EPA Region IX
Federal Facilities Coordinator

1726

MEMORANDUM

To: Carolyn Douglas, EPA Region IX
Federal Facilities Coordinator

From: William E. Ritthaler, URS Consultants, Inc. WR

Subject: Completed Work

cc: Philip Armstrong ,EPA Region IX Work Assignment Manager
Travis Cain, EPA Region IX Project Officer
Jeri Simmons, EPA Region IX Contract Officer

Attached is the following completed:

PA: ☐ PA Review: ☐ SI: ☐ ESI: ☐

Other: Federal Facility PA Review

Site Name: Kaiser Eagle Mountain
Latitude: 33° 51' 55" North (4940)
Longitude: 115° 28' 25" West
EPA ID#: CA0000053090
City, County: Eagle Mountain, Riverside County

State Recommendation:
(for reviews only)

For EPA Use Only

EPA Further Action Determination: PA complete N
Lead Agency: Fed Fac
Sign-off Date: 8/19/94
Initials of Site Assessment Manager: ydl
Document Screening Coordinator: JMJ 8/22/94
Chief, Site Evaluation and Grants Section: TCS for 8/26/94

1.0 Introduction

The U.S. Environmental Protection Agency (EPA), Region IX, under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), has tasked URS Consultants, Inc. (URS) to conduct a review of Federal Facility Preliminary Assessment (PA) documentation at the Kaiser Eagle Mountain site.

The Kaiser Eagle Mountain site was identified as a potential hazardous waste site and entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) on November 15, 1993 (1). The site was brought to EPA's attention when a citizens' group forwarded information regarding the site to EPA. A PA-level evaluation of the Kaiser Eagle Mountain site was performed for EPA in April 1994 by the California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA DTSC) (2). The purpose of the PA was to review existing information on the site and its environs to assess the threat(s), if any, posed to public health, welfare, or the environment, and to determine if further investigation under CERCLA/SARA is warranted. After reviewing the PA, EPA decided that further investigation of Kaiser Eagle Mountain would be necessary to more completely evaluate the site using EPA's Hazard Ranking System (HRS) criteria. The HRS assesses the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). The NPL identifies sites at which EPA may conduct remedial response actions. This report is the result of URS' evaluation of the submitted data.

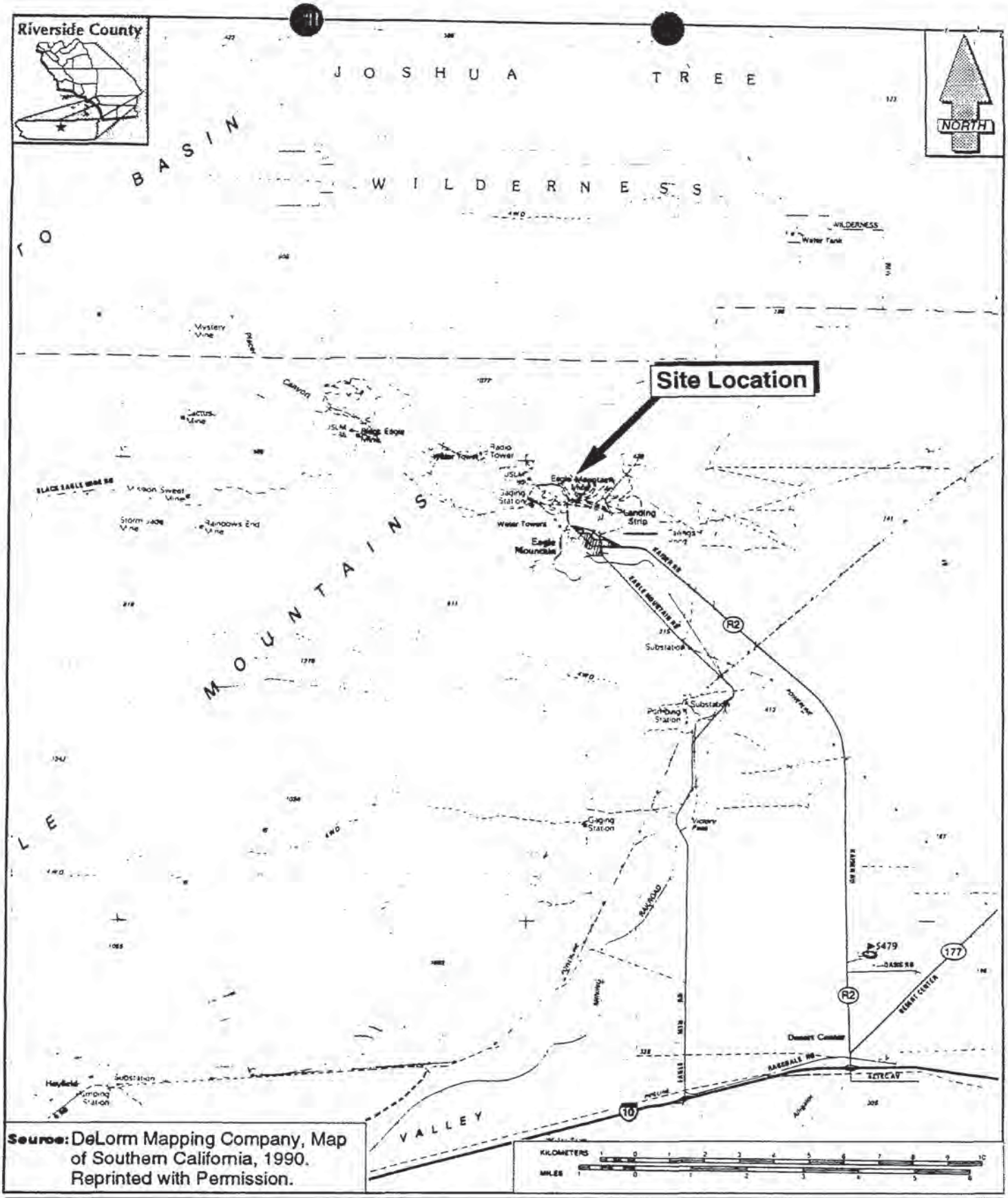
2.0 Site Description

The Kaiser Eagle Mountain site occupies 4,686 acres, of which approximately 3,271 acres are administered by the Department of Interior, Bureau of Land Management (BLM). The site is located in the Mojave Desert, in Riverside County, California, adjacent to the community of Eagle Mountain. The geographic coordinates of the site are Latitude 33° 51' 55" North, Longitude 115° 28' 25" West, Township 3 South, Range 14 East, Section 36, San Bernardino Baseline and meridian. The site is located approximately 5 miles north of Desert Center, California, and about 12 miles northeast of the Salton Sea (see Figure 1, Site Location Map) (3,4,5)

The Kaiser Eagle Mountain mine consists of three large open pits, each of which are approximately 1 to 2 miles long, 2,000 feet wide, and 400 to 800 feet deep. Mining activities have resulted in the creation of large stockpiles of mining spoils adjacent to the open pits (2,5).

3.0 Operational History and Waste Characteristics

The Kaiser Eagle Mountain site was acquired by Kaiser Steel Corporation in 1944. The production of iron ore from the site began in 1948. The mine provided blast furnace feed for Kaiser's Fontana, California steel mill. The closure of Kaiser's Fontana mill caused Kaiser to cease operations at the Eagle Mountain Mine in 1983. On February 11, 1987, Kaiser Steel filed bankruptcy due to problems at the Fontana mill site. In 1988, the Kaiser Eagle Mountain site was organizationally separated from the Fontana mill site and is now the property of Kaiser Resources, Inc. (2).



Source: DeLorm Mapping Company, Map of Southern California, 1990. Reprinted with Permission.

URS Consultants
100 California Street
San Francisco, CA 94111
August 14, 1994

Site Location Map

Kaiser Eagle Mountain
Eagle Mountain, California
Riverside County

FIGURE

1

Mining operations at Kaiser Eagle Mountain included ore and overburden removal, and ore processing. Ore and overburden removal operations consisted of first blasting to loosen deposits, then loading ores into trucks and rail cars. Hazardous wastes related to ore and overburden removal operations include waste oils and solvents that are associated with vehicle maintenance, and polychlorinated biphenyls (PCBs) used in electrical transformers that supplied energy to electric shovels, metal separators, and other equipment. Hazardous wastes are stored on property adjacent to mine pits that are owned by Kaiser Resources Inc., prior to their transportation to a designated recycling or disposal facility (2,5).

Ore processing operations included blending operations to produce concentrated ores. The purpose of ore processing at the site was to separate iron-bearing minerals from the non-iron-bearing minerals without changing their chemical nature, and then to pelletize the concentrated ore for ease of handling and proper smelting characteristics. Mineral separation was completed by magnetic separation. No acids or hazardous chemicals were used to process the ores (2).

Hazardous waste generated at this site included grease, oils, solvents, and PCBs from decommissioned transformers. During the decommissioning period between 1983 and 1987, Kaiser entered into contract with numerous vendors for equipment salvaging and dismantling of the mine infrastructure. Kaiser currently continues to operate a fleet of vehicles that generate hazardous waste, such as waste oil and solvents from routine vehicle maintenance. Vehicles are used for general site upkeep and maintenance. Hazardous waste is placed in drums and containers and stored on property owned by Kaiser Resources Inc. prior to transportation to a designated recycling or disposal facility (2).

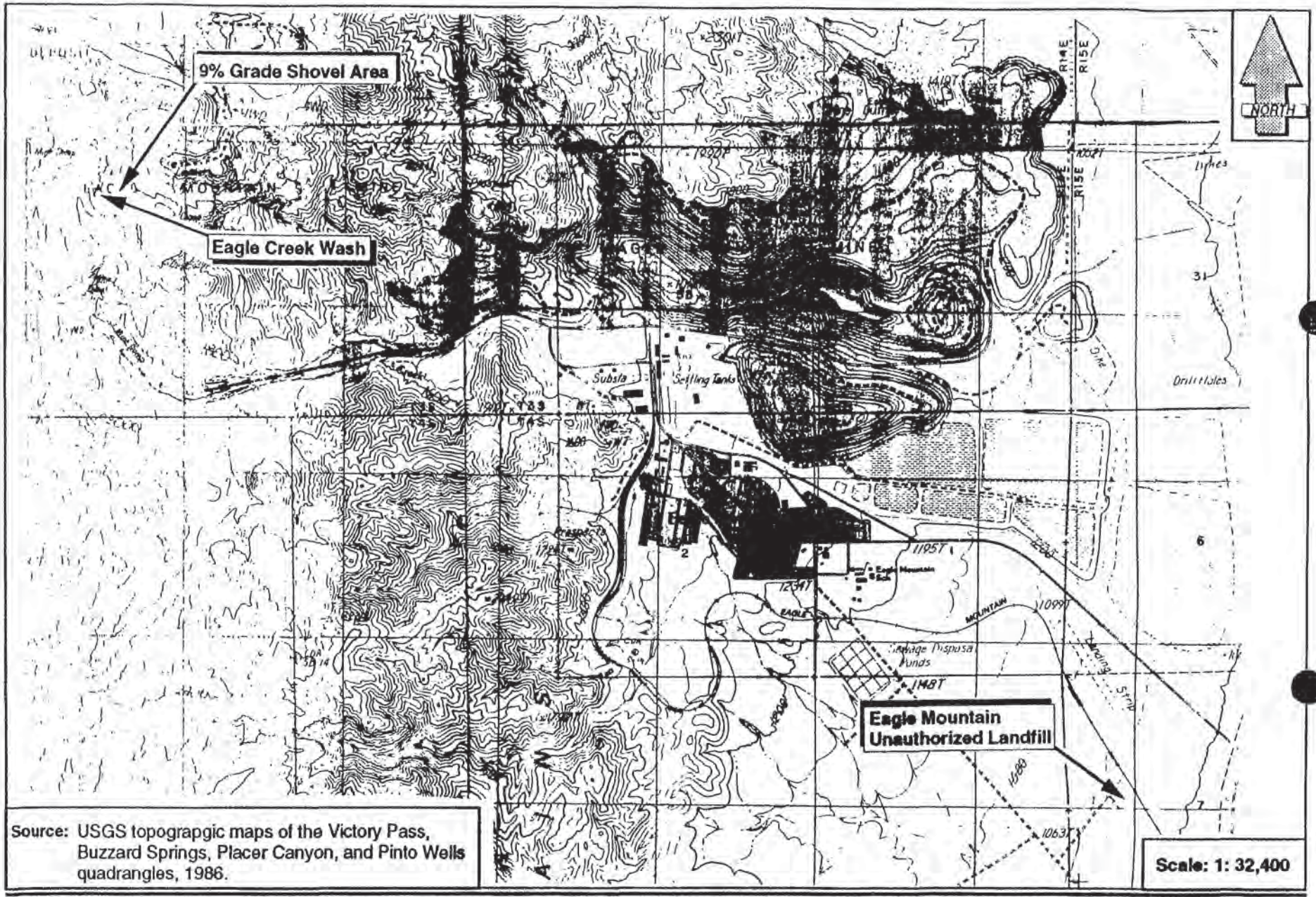
Sampling of the site was conducted by Cal-EPA DTSC in January of 1994. Cal-EPA DTSC collected nine soil samples from areas where alleged hazardous waste disposals occurred. Two of these areas, the 9% grade shovel area and the Eagle Creek Wash area, are located on public lands (see Figure 2, Facility Map). Soil samples were collected at depths ranging from 3 to 15 inches below ground surface (bgs) (2,6).

In addition to potential sources of contamination associated with mine operations, one potential source of contamination, the Eagle Mountain Unauthorized Landfill, is also located on BLM lands approximately 4 miles from the 9% grade shovel area and the Eagle Creek Wash (see Figure 2, Facility Map). This potential source of contamination was not inspected by Cal-EPA DTSC in January of 1994 (2,6).

The potential sources of contamination at Kaiser Eagle Mountain include the following:

9% Grade Shovel Area

The 9% Grade Shovel Area was used as an electric shovel servicing area, according to Mr. Lowell Ball, a member of the Concerned Citizens of the Chuckwalla Valley. The 9% Grade Shovel Area is approximately 700 feet long by 400 feet wide. It is not known what type of wastes were generated at this location or how wastes were disposed of. Two soil samples were collected from a depth of 10 inches bgs at the north and south ends of this area during the January 27, 1994 inspection by Cal-EPA DTSC. Soil samples were analyzed for metals and semi-volatile organic compounds by EPA-accepted analytical methods. Results of analysis did not reveal the presence of semi-volatile organic compounds. Metal concentrations detected in samples collected from this area were not three times greater



Source: USGS topograpgic maps of the Victory Pass, Buzzard Springs, Placer Canyon, and Pinto Wells quadrangles, 1986.

URS Consultants
100 California Street
San Francisco, CA 94111
August 15, 1994

Facility Map

Kaiser Eagle Mountain
Eagle Mountain California
Riverside County

FIGURE

2

than the mean concentration of all the nine samples collected by Cal-EPA DTSC in January 1994 for any given species of metal (2,7).

Eagle Creek Wash

Eagle Creek Wash was observed to contain an area of stressed vegetation during the Cal-EPA DTSC inspection of the 9% Grade Shovel Area. The area of stressed vegetation comprised a circle approximately 10 feet in diameter. The area was inspected for buried containers with a magnetometer (metal detector). Soil from this area was also screened for organic vapors. Neither buried containers or ogranic vapors were detected during this investigation. A soil sample was collected from 10 inches bgs from the area of stressed vegetation and analyzed for metals, volatile organic compounds, and semi-volatile organic compounds by EPA-accepted analytical methods. Results of analysis of the soil sample revealed the presence of toluene at 37 micrograms per kilogram (µg/Kg), and p-isopropyl toluene at 170 µg/Kg. Metals concentrations detected in samples collected from this area were not three times greater than the mean concentration of the nine samples collected by Cal-EPA DTSC in January 1994 for any given species of metal. Background sampling was not conducted as part of this sampling event. Concentrations of contaminants found in soils in Eagle Creek Wash do not exceed health-based benchmark concentrations (2,7).

Eagle Mountain Unauthorized Landfill

The Eagle Mountain Unauthorized Landfill is located on an estimated 2 acres of BLM lands approximately 1.5 miles southeast of the community of Eagle Mountain. The Eagle Mountain Unauthorized Landfill is approximately 4 miles from the 9% Grade Shovel Area and the Eagle Creek Wash Area. The Eagle Mountain Unauthorized Landfill was operated by Kaiser Steel Corporation and used as a municipal landfill by residents of the community of Eagle Mountain. Limited documentation is available regarding this potential source of contamination. According to Mr. Orlow Anderson, the landfill was closed in 1973. According to Mr. Robert Dale, the landfill occasionally caught fire. There have been no known sampling events conducted at this potential source of contamination (8).

4.0 HRS Considerations

The groundwater pathway is not a primary pathway of concern at the Kaiser Eagle Mountain site. Groundwater within 4 miles of the site is used primarily for irrigation in the community of Eagle Mountain. Eagle Mountain currently uses bottled water as its source of drinking water. Bottled water is supplied from a purveyor located in Blythe, California, approximately 45 miles east of the site (7).

The surface water pathway is not a primary pathway of concern at the Kaiser Eagle Mountain site. Surface water downgradient of the site is not used as a source of drinking water or as a fishery. There are no known sensitive environments located within 15 miles downstream of the site (4,5).

The soil exposure pathway is a pathway of concern at the Kaiser Eagle Mountain Site. According to Jan Roberts of Kaiser Resources, there are approximately 1,000 people, including approximately 425 inmates located at a state prison, living in the Community of Eagle Mountain; however, the community is located on BLM lands greater than 1 mile from potential sources of contamination. Terrestrial sensitive species that potentially

have habitats on areas of observed contamination at the Kaiser Eagle Mountain site include the desert tortoise (Gopherus agassizii), a State and Federal threatened species (9,10).

The air pathway is not a pathway of concern at the site. There is no documentation of a release of hazardous substances to ambient air from the site. There are approximately 1,000 people currently living within 4 miles of potential sources of contamination. Sensitive species located within 4 miles of potential sources of contamination include the desert tortoise (Gopherus agassizii), the foxtail cactus (Escobaria vivipara var Alversonii), and the California ditaxis (Ditaxis Californiaica). The desert tortoise is a State and Federal Threatened Species. The foxtail cactus and California ditaxis are under review as to their Federal endangered or threatened status (9,10).

5.0 Current Condition of the Site

The Kaiser Eagle Mountain facility is a formerly active open pit iron ore mine and processing facility. The Kaiser Eagle Mountain site occupies 4,686 acres, of which approximately 3,271 acres are administered by the BLM. A proposal to convert the "East Pit" of the mine into a Class III municipal landfill is being considered. The conversion to a landfill would include a land exchange between Kaiser Resources Inc. and the BLM. There are no plans to further investigate potential sources of contamination located at the site (5,6).

6.0 Summary and Conclusion

The Kaiser Eagle Mountain site occupies 4,686 acres, of which approximately 3,271 acres are administered by the Department of Interior, Bureau of Land Management. The site is located in the Mojave Desert, in Riverside County, California.

The Kaiser Eagle Mountain site was acquired by Kaiser Steel Corporation in 1944. The production of iron ore from the site began in 1948. The mine provided blast furnace feed for Kaiser's Fontana, California steel mill. The closure of Kaiser's Fontana mill caused the Eagle Mountain Mine to stop operating in 1983. On February 11, 1987, Kaiser Steel filed bankruptcy due to problems at the Fontana mill site.

Hazardous wastes associated with the Kaiser Eagle Mountain site include waste oils and solvents that are associated with vehicle maintenance, and polychlorinated biphenyls (PCBs) used in electrical transformers that supplied energy to electric shovels, metal separators, and other equipment. Hazardous wastes are stored on property owned by Kaiser Resources Inc., prior to their transportation to a designated recycling or disposal facility.

The following are the HRS factors pertinent to the Kaiser Eagle Mountain site:

- Groundwater within 4 miles of the site is not used as a source of drinking water.
- Surface water within 15 miles downstream of the site is not used as a source of drinking water.
- There are approximately 1,000 people residing within 4 miles of potential sources of contamination on-site.

REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IX

Site Name: Kaiser Eagle Mountain **EPA ID #:** CA0000053090

Alias Site Names: Eagle Mountain Mine

City: Eagle Mountain **County or Parish:** Riverside **State:** CA

Refer to Report Dated: August 19, 1994 **Report Type:** Federal Facility PA Review

Report developed by: URS Consultants, Inc.

DECISION:

☒ **1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:**

☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (Site Evaluation Accomplished - SEA)

☐ 1b. Site may qualify for further action, but is deferred to: ☐ RCRA ☐ NRC

☐ **2. Further Assessment Needed Under CERCLA**

2a. (optional) Priority: ☐ Higher ☐ Lower

2b. Activity Type ☐ PA ☐ ESI ☐ SI ☐ HRS evaluation

☐ Other_____

DISCUSSION/RATIONALE:

Report Reviewed and Approved by:_____ **Signature:** Carolyn J. Douglas **Date:** 8/19/94

Site Decision Made by:_____ **Signature:** Carolyn J. Douglas **Date:** 8/19/94

References

1. U.S. Environmental Protection Agency (EPA), Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, February 15, 1994.

2. California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA DTSC), *Complaint Inspection and Sampling Report*, April 7, 1994.

3. U.S. Geological Survey, Topographic Map of the Victory Pass 7.5 minute quadrangle, 1986.

4. U.S. Geological Survey, Topographic Map of the Buzzard Springs 7.5 minute quadrangle, 1986.

5. U.S. Department of the Interior Bureau of Land Management (BLM) and Riverside County, *Final Environmental Impact Statement/Environmental Impact Report for the Proposed Eagle Mountain Landfill Project*, June 1992.

6. Key, John, BLM, and John P. Zwierzycki, URS Consultants, Inc. (URS), telephone conversation, August 15, 1994.

7. Anderson, Orlow, Site Manager, Mine Reclamation Corporation, and John P. Zwierzycki, URS, telephone conversation, August 15, 1994.

8. Dale, Robert, former employee, Kaiser Steel Corporation, and John P. Zwierzycki, URS, telephone conversation, August 15, 1994.

9. Roberts, Jan, Director of Eagle Mountain Operations, Kaiser Resources Inc. and John P. Zwierzycki, URS, telephone conversation, August 13, 1994.

10. California Department of Fish and Game, California Natural Diversity Data Base, printout for the Victory Pass, Pinto Wells, Buzzard Springs, and Placer Canyon quadrangles, 1991.

Appendix A
Contact Log

Contact Log

Facility Name: **Kaiser Eagle Mountain**
Facility ID#: **CA0000053090**

Contact	Affiliation	Phone #	Date	Information
Orlow Anderson	Mine Reclamation Inc.	(619) 392-4308	8/12/94	Mr. Anderson stated that the community of Eagle Mountain uses imported bottled water for drinking water. Eagle Mountain formerly piped water from nearby springs for drinking.
Jan Roberts	Kaiser Resources Inc.	(619) 392-4341	8/12/94	Ms. Roberts is the Director of Eagle Mountain Operations for Kaiser Resources Inc. Ms. Roberts stated that there are approximately 1,000 people currently residing in the community of Eagle Mountain, including 425 inmates at the state prison. Riverside County Environmental Health Department is the lead agency for cleanups at the site. Historical mining operations used black powder for blasting. Hazardous materials were not used in processing ores.
John Key	U.S. Department of Interior, Bureau of Land Management (BLM)	(909) 697-5383	8/15/94	Mr. Key stated that of all the potential sources of waste mentioned in the Complaint Inspection and Sampling Report, only the 9% Grade Shovel Area and the Eagle Creek Wash Area are located on BLM lands. Additionally, an unauthorized landfill is located on BLM lands just south of an airstrip. It is believed that the unauthorized landfill closed in the 1970s. Landfill operations may have included burning of wastes.

Contact Log (Cont)

Facility Name: **Kaiser Eagle Mountain**
Facility ID#: **CA0000053090**

Contact	Affiliation	Phone #	Date	Information
Orlow Anderson	Mine Reclamation Inc.	(619) 392-4308	8/15/94	Mr. Anderson stated that the 9% Grade Shovel Area is approximately 700 feet long and approximately 400 feet wide. The Eagle Creek area is a circle approximately 10 feet in diameter. The unauthorized landfill was active until 1973. The landfill was used for municipal waste and construction debris. Occasionally the landfill was set on fire.
Robert Dale	formerly with Kaiser Steel Corporation.	(619) 747-5093	8/15/94	Mr. Dale stated that the Eagle Mountain Unauthorized Landfill is approximately 2 acres in area. This disposal site was operated by Kaiser Steel. Wastes at the site were covered with soil on a regular basis. The site occasionally caught fire.

Appendix B
Latitude/Longitude Worksheet

LATITUDE AND LONGITUDE CALCULATION WORKSHEET
#1
WHEN USING CUSTOM RULER OR COORDINATOR (TM)

SITE: Kaiser Eagle Mountain NUMBER: CA0000053090

AKA: Eagle Mountain Mine SSID: _____

ADDRESS: _____

CITY: Eagle Mountain STATE: CA ZIP CODE: 92239

SITE REFERENCE POINT: deepest part of westernmost pit

TOPO MAP Victory Pass TOWNSHIP: 3 South RANGE: 14 East

SCALE: 1:24,000 MAP DATE: 1987 SECTION: 36 1/4 ____ 1/4 ____ 1/4 ____ 1/4

MAP DATUM: ☐ 1927 ☒ 1983 MERIDIAN: San Bernardino

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 7.5' MAP:

LONGITUDE: 115° 22' 30" LATITUDE: 33° 45' 00"

COORDINATES FROM LOWER RIGHT (SOUTHEAST) CORNER OF 2.5 SUB-MAP:

LONGITUDE: 115° 27' 30" LATITUDE: 33° 50' 00"

CALCULATIONS: LATITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH BOTTOM OF GRID. ALIGN THE TOP OF THE SCALE WITH THE TOP OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1OR 0.5 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

1' 55"

C) RECORD LATITUDE: 33° 51' 55" N

CALCULATIONS: LONGITUDE (7.5 MINUTE QUADRANGLE MAP)

A) ALIGN THE BOTTOM OF THE SCALE WITH THE RIGHT SIDE OF GRID. ALIGN THE TOP OF THE SCALE W ITH THE LEFT SIDE OF GRID. POSITION EDGE OF RULER OVER SITE REFERENCE POINT WHILE KEEPING TOP AND BOTTOM ALIGNED.

B) READ TICS ON RULER AT 1 SECOND INTERVALS. (INTERPOLATE IF POSSIBLE)

00' 55"

C) RECORD LONGITUDE: 115° 28' 25" W

INVESTIGATOR: John P. Zwierzycki DATE: 8/11/94

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, Governor

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4
245 West Broadway, Suite 350
Long Beach, CA 90802-4444

COMPLAINT INSPECTION AND SAMPLING REPORT
Eagle Mountain Mine
(EMM)

Desert Center, CA 92239
EPA ID# CAD003934890

Inspected by: Richard Hubbell
Dates of Inspection: February 10 & 11, 1994
Report by: Richard Hubbell
Date of Report: April 7, 1994

I. Purpose

In December 1993, the Riverside County Department of Environmental Health requested assistance from the Department of Toxic Substances Control (DTSC) in the investigation of citizen complaints that hazardous waste had been illegally disposed at the Eagle Mountain Mine. This request was formalized on January 11, 1994 following a resolution by the Riverside County Board of Supervisors. DTSC agreed to meet with the complainants, review site information, conduct a site inspection and to make recommendations concerning methods for further site characterization and remediation as needed.

II. Complaint Allegations

Complainants had alleged for about five years that hazardous wastes in large quantities were buried on this site, including PCBs, solvents, and waste oils. Several complainants have filed lawsuits regarding environmental issues against Kaiser Resources, Inc. (KRI), Mine Reclamation Corporation (MRC), and Riverside County, and filed an injunction against the U. S. Department of the Interior Bureau of Land Management (BLM) to prevent a land exchange for portion of the mine.

On January 27, 1994, Sharon Fair, Richard Hubbell and Chris Guerre of DTSC met with complainants FX-6 Personal Privacy FX-6 Personal Privacy to discuss sites at the Eagle Mountain Mine where hazardous waste may have been disposed. The information provided by FX-6 Personal Privacy is summarized as follow:

Location:	Potential hazardous waste disposed:
Central Pit Fueling Station	Used motor oil from heavy equipment oil changes.
Underground	Off-site hazardous waste, type unknown
9% Grade Shovel Area	Used oil, solvent from heavy equipment maintenance
Metallurgical Lab	Lab chemicals disposed to tailings pond
Beneficiation Plant Area	PCBs and Oils drained to sump and out to Fine Tailings pond. PCB's burned in plant fire.
Scrap Staging Area & Main Shop Fueling Area	Oils, solvents
Coarse Tailings Pile	Unknown hazardous waste
Fine Tailings Pond	Oils, PCBs, solvent
East Pit Storage Yard	Oils and solvents
East Pit Overburden Pile	Drums of hazardous waste, type unknown

Core Garden	Hundreds of drums of hazardous waste excavated and reburied in December 1993
Jenkinville Site	Used motor oil from heavy equipment oil changes disposed to ground.
Open Burn Pits	Oil solvent paint

Citizens for the Chuckwalla Valley, represented by the above-listed persons, were concerned that residuals from past disposal of hazardous waste at the Eagle Mountain Mine could remain underground, with chemical contamination of groundwater, soil, and air accelerated and/or potentiated by the installation of a proposed Class III sanitary landfill. The citizens' groups also expressed the perception that these issues were not fully investigated and resolved by other agencies. A Riverside County Grand Jury investigation of these complaints was conducted in 1989; however, it did not result in the filing of any criminal charges for illegal treatment, storage, or disposal of hazardous wastes.

III. Site Background/ Proposed Landfill Project

A. Mining Operations

The Eagle Mountain Mine is located in Riverside County, 60 miles east of Indio. Eagle Mountain was acquired by Kaiser Steel Corporation in 1944, and mine production of iron ore began in 1948. The mine provided blast furnace feed for Kaiser's Fontana steel mill and ore for export to Japan. The closing of the Fontana steel mill caused the Eagle Mountain Mine to stop operating in 1983.

Kaiser mining operations included beneficiation facilities and ore blending installations to produce concentrated ores. Kaiser developed slurry blasting and down-the-hole drilling technologies. The water process mining operation utilized metal separators, magnetic separation and process facilities. Other operations included primary and secondary crushing, pelletizing, and loading. The basic purpose of the beneficiation processes at the mine site was to separate iron-bearing minerals from the non-iron-bearing minerals without changing the chemical nature of the minerals, and then to pelletize the concentrated ore for ease of handling and proper smelting characteristics. No acids or hazardous chemicals were used to process the ores.

In 1986, Kaiser developed a workplan to dismantle the mining operations and the former mine labor camp. This workplan is being carried out under the oversight of

Riverside County and other regulatory agencies. Current projections are that the clean-up should be completed by approximately July, 1995. On February 11, 1987, Kaiser Steel filed bankruptcy due to problems at the Fontana mill site. In 1988, the mine site and other Kaiser assets were organizationally separated from the Fontana mill site ~~to form~~ under Kaiser Resources Inc.

B. Proposed Class III Landfill

An Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) was completed in June, 1992 under the lead of the U.S. Department of the Interior Bureau of Land Management and the County of Riverside Planning Department. As noted in the June 1992 final EIS/EIR, Section 1, page 1-2, for the Eagle Mountain Landfill Project:

The "Eagle Mountain open pit iron ore mine was operated by Kaiser Steel Corporation until 1983. Three large open pits (approximately one to two miles long) were excavated during Kaiser's operations at the Eagle Mountain Mine. These are named the Black Eagle Pit (westernmost), Central Pit, and East Pit (formerly known as the North-South Pit). The past mining activities have resulted in the creation of significant stockpiles of spoils material on the site. Mine Reclamation Corporation has leased approximately 8,300 acres of the former Eagle Mountain mine from Kaiser Steel Resources, Inc. for a period of 100 years. MRC proposes to develop approximately 4,684 acres of this property to operate a Class III nonhazardous sanitary landfill, of which 2,262 acres would contain the landfill itself. The East Pit, which is proposed for use for landfilling, is approximately two miles long and in an east-west direction, 2,000 feet wide north to south, and 400 to 800 feet deep. The proposed action will involve a land exchange between BLM and Kaiser Steel Resources, Inc. and the conversion of the existing 52-mile Kaiser railroad right-of-way and Eagle Mountain Road right-of-way to new FLPMA rights-of-way. The Kaiser railroad would be reactivated to allow rail transport to the site." (Please see map Attachment 10 showing the landfill "footprint" superimposed on the mine site.)

"Hazardous waste" generated at this site included grease, diesel fuels, oils, solvents, and PCBs from decommissioned transformers. Other "non-hazardous solid wastes" included overburden, coarse tailings, fine tailings and demolition debris such as scrap metal, wood, and piping. (Please see Section IV-B of this report for regulatory definitions.) During the decommissioning period between 1983 and 1987, Kaiser entered into contract with numerous

vendors for surplus equipment selling, and dismantling and demolition of the mine infrastructure. Kaiser currently continues to operate a fleet of vehicles which generate hazardous waste, such a waste oil and solvents, from routine vehicle maintenance. Hazardous wastes are characterized before shipping, and are sent off-site via registered hazardous waste haulers under hazardous waste manifests.

IV. Regulatory Status of Site

A. "Hazardous Waste Generator" Classification - Kaiser Resources, Inc.

In terms of waste generation and disposal regulatory jurisdiction at the facility, Kaiser was and continues to be a hazardous waste generator and a mining solid waste disposal site. Hazardous waste generators are typically regulated by local agencies such as Riverside County Environmental Health Services as authorized under a Memorandum of Understanding (MOU) with the DTSC. Solid waste disposal facilities are regulated by Regional Water Quality Control Boards, the Local Enforcement Agencies, and the California Integrated Waste Management Board.

B. Regulatory Definitions (Please see Attachments for excerpts from Health and Safety Code and title 22, Cal. Code Regs.)

1. "Hazardous Material" is defined in the California Health and Safety Code (HSC) section 25501(k) as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

2. "Hazardous waste" is defined in HSC section 25117 as either of the following:

> "(1) A waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either:

(A) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

(B) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise managed.

(2) A waste which meets any of the criteria for the identification of a hazardous waste adopted by the department pursuant to Section 25141."

3. The "criteria" for the identification of a hazardous waste adopted by the department are found in title 22, Cal. Code Regs. section 66261 et seq., and include toxicity, reactivity, ignitability, and corrosivity.

4. During 1980 to 1989, the U.S. Environmental Protection Agency (U.S. EPA) Office of Solid Waste Mining Waste Section went through a rulemaking process to study those mining wastes which needed to be regulated as hazardous wastes and which could feasibly be regulated as such. U.S. EPA concluded that extraction, beneficiation and 20 specified mineral processing waste streams did not need to be regulated as hazardous waste. U.S. EPA found those wastes were high volume, low toxicity and low mobility wastes. U.S. EPA also specified that in the event that mining wastes from a mining operation did contaminate drinking water sources, the mining operation must cease, and the mine site be remediated under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Wastes from the "extraction, beneficiation and mineral processing" of ores and minerals which are not regulated under the federal Resource Conservation and Recovery Act (RCRA) Subtitle C (hazardous waste, see Attachment 16, 40 CFR 261.4(b)(7)) are also exempt from the California hazardous waste statutes and regulations (Attachment 17, HSC section 25143.1(b)). Such wastes are regulated as solid wastes by the Regional Water Quality Control Board under the provisions of title 23, Cal. Code Regs. HSC section 25143.1(b)(3)(A) defines wastes from the extraction, beneficiation and mineral processing as follows:

"(i) Soil, waste rock, overburden, and any other solid, semi-solid, or liquid natural materials that are removed, unearthed, or otherwise displaced as a result

of excavating or recovering an ore or a mineral.
(ii) Residuals of ores or minerals after those ores or minerals have been removed, unearthed, or otherwise displaced from their natural sites and physically or chemically treated or otherwise managed in order to separate or concentrate the commercial product present in the ore or mineral, or processed to produce a final marketable product."

5. "Maximum Contaminant Level" (MCL) is described by title 22, California Code of Regulations (Cal. Code Regs.) section 64473(a) as follows:

"Distribution system water containing substances exceeding the maximum contaminant levels shown in Tables 6 and 7 may be objectionable to an appreciable number of people, but is not generally hazardous to health."

MCL's from Table 6 of constituents tested for as part of this investigation:

copper.....1.0 mg/l
zinc.....5.0 mg/l

6. Fine Tailings Pond

The fine tailings are "beneficiation" wastes and therefore not subject to hazardous waste regulation. The fine tailings are regulated by the Colorado River Regional Water Quality Control Board (RWQCB) under title 23, Cal. Code Regs. The fine tailings ponds have been "certified closed" by the RWQCB.. In order for the RWQCB to certify the ponds "closed", the facility had to undergo a "closure" process, and prove to the RWQCB that the ponds had not contaminated the groundwater by means of the prescribed data/analysis from water sampling and soil sampling. The facility is currently in the 30-year post-closure monitoring program to ensure that the ponds will not contaminate groundwater in the future.

MRC has drilled and sampled 15 monitoring wells around the proposed landfill site. The monitoring data shows that the groundwater is high in total dissolved solids, sodium and fluorides, none ~~of high~~ which are hazardous waste constituents.

7. During the active mining period, Kaiser Steel, Inc. used radioactive gauges ("sources") to monitor ore on

conveyor belts. During the decommissioning process, Kaiser dismantled the gauges. According to information provided to DTSC by Department of Health Services Radiologic Health Branch, the disposal process met all regulatory requirements.

V. Contacts with Other Agencies and Preparatory Meetings

Background information on this site was gathered from the USDI BLM, RWQCB, CIWMB, Riverside County EHS, DHS-Rad Health.

A preparatory meeting was held with interested parties on February 9, 1994 at the U.S. Department of the Interior's BLM office in Palm Springs. During the meeting, KRI representatives described the history of the mining operations and site clearance and environmental activities. Riverside County staff described the county's involvement and showed a video of the mine site. The complainants discussed their concerns. MRC personnel presented maps showing the proposed landfill footprint, explaining which areas of the mine fell within and outside the footprint. Finally, the Department's staff discussed the proposed investigation and tour sequence, and explained the Department's sampling techniques. Site safety measures and logistics were discussed. KRI reserved their rights as operator to limit site access to three complainants and agency representatives and to two additional members of the public.

IV. Observations

On February 10, 1994, representatives of various private organizations and public agencies met at the Kaiser Resources, Inc. office at the Eagle Mountain Mine to conduct a tour and sampling exercise at the Eagle Mountain Mine. These representatives were as follows:

Concerned Citizens of the Chuckwalla Valley (CCV)

FX-6 Personal Privacy

Kaiser Resources, Inc. (KRI)

Gerry Fawcett, Executive Vice President
Rob Hartman, Environmental Projects Manager

Mine Reclamation Corporation (MRC)

Orlo Anderson, Mine Superintendent
Gary Johnson, Vice President
Kaiser Jan Roberts, Director of Eagle Mountain Operations

Bureau of Land Management (BLM)

John Key, Senior Hazmat Coordinator
Verla Harle, Realty Specialist
Don Stager, Ranger

Riverside Environmental Health Services (RCEHS)

John Fanning, Director
Joe Asbury, Inspector
Laurie Holk, Sanitarian

California Integrated Waste Management Board (CIWMB)

David Otsubo, Associate Waste Management Specialist

Members of the Community

FX-6 Personal Privacy

Department of Toxic Substances Control (DTSC)

Sharon Fair, Senior Hazardous Materials Specialist
Richard Hubbell, Associate HMS
Mark Fuentes, HMS
Chris Guerre, Associate Engineering Geologist
Bill Owens, AEG

After a brief organizational discussion, the group divided up into different vehicles and we started the tour. We drove to the extreme western border of the proposed landfill where we surveyed a location known as the Central Pit Fueling Station.

A. Central Pit Fueling Station

The Central Pit Fueling Station was a two-level area. Ten above-ground tanks were located on the upper level; all of the tanks were empty. These tanks had been used to store solvents, diesel, and hydraulic fluids. We surveyed the upper area; observed no surface soil contamination was observed. On the lower level, we observed some surface soil contamination at the service station site. According to Rob

Hartman, KRI already has plans to remediate the site. Most of the staining appeared to be diesel which is typically non-hazardous. We took no samples since this was an area that KRI already had identified to remediate and the extent of contamination appeared to be limited. (Photos 1-6)

B. Underground

Next, we proceeded to the Underground, which was an underground mining operation. The Underground was 3,800 feet long, and consisted of two parallel tunnels, joined at the far end. About 14 members of the tour group drove through the Underground, riding in two vans supplied by MRC. We stopped at a civil defense shelter in the Underground. The shelter had empty water drums, food rations and various of survival supplies. We observed no hazardous waste in the shelter or anywhere else in the underground.

The Underground did have an upper level which was blocked off to vehicular traffic by cave-ins. According to Rob Hartman, the air in the upper level has an oxygen level less than 19.5%. Such conditions require using self-contained breathing apparatuses and obtaining a "Confined Space Entry Permit" from Cal-OSHA, so we decided not to enter that portion of the Underground. We concluded that if the area was closed to vehicular traffic it would be unlikely that anybody would have been able to dispose of any hazardous waste in the upper level. (Photo 7)

When we exited the underground, we walked to a former explosives magazine, which was northeast of the Underground entrance. I observed that the magazine was completely empty. Larry Charpied and Lowell Ball discovered thick waste grease which had been disposed along the side of the road between the underground and the explosives magazine. They showed me the location and I observed that the area covered 2 to 3 square feet and consisted of surface staining with grease. (Photos 8-10)

C. 9% Grade, Shovel Area and Eagle Creek Wash

The 9% Grade Shovel Area was the next place that we inspected. According to Mr. Ball, large electric shovels were serviced in the area, where the waste oil, grease and solvent would be disposed to the soil. I asked him to suggest specific locations where we could sample. Mr. Ball said that the wastes had been disposed of all over place and we would likely find contaminants anywhere we sampled.

Mark Fuentes sampled the soil on the south side of the 9% Grade road and east of an electric shovel near a gravel pile. Mr. Fuentes dug a hole 10 inches deep with a shovel and scooped out the samples with a disposable plastic scoop. Mr. Fuentes collected three co-located samples from this hole. The samples were placed into jars, sealed with evidence tape and labeled. The samples were given identified as "SH-1-A", "B", & "C". DTSC retained custody of the "A" & "C" samples and Rob Hartman of KRI took custody of the B sample. Mr. Charpied signed the evidence tape on their "C" sample. We followed this system of chain of custody for the remainder of the two-day sampling exercise, with either Larry or Donna Charpied signing the evidence tape on their samples. (Photos 11 & 12)

Next, we observed an area of dead grass down in the Eagle Creek wash just below the shovel area. Bill Owens surveyed the area with the magnetometer, which is a device for locating buried iron or steel objects. Mr. Owens was attempting to discover if any steel drums had been buried in the area of the dead grass,but he found nothing to indicate the presence of any buried drums. Rani Patole surveyed the area of the dead grass with an Hnu photo-ionization detection meter and detected no organic vapors. Mark Fuentes took three co-located soil samples from a 10 inch deep hole within the area of dead grass. These samples were labeled "EC-1-A", "B", & "C". (Photos 13 & 14)

We then went to the north side of the road and took three more co-located soil samples from a 6 inch deep hole. The samples were identified as "SH-2-A", "B", & "C". The "B" sample was given to Rob Hartman and we kept the "A" and "C" samples. (Photos 15 & 16)

D. Metallurgical Laboratory

The next site that we investigated was the Metallurgical Laboratory. The Lab was used for assaying iron ore samples during the time when ore was being actively mined. The Lab had been inactive since 1982, and had been partially dismantled. During the walk-through, I observed reagent bottles and containers of naphtha solvent, 2-propanol, sodium thiosulfate powder, sodium sulfite and paint. Although these containers appeared to be in good condition, and the materials contained in them appeared to be usable product, I suggested to the KRI representatives that these be properly disposed.

E. Beneficiation Plant Area

We went to the site of the former Beneficiation Plant. The Plant had been demolished. According to Larry Charpied, a fire occurred in the Beneficiation Plant in July 1989 and during the course of the fire transformers containing PCBs had burned. Mr. Charpied had learned this information from prison inmates who had been called in to fight the fire. Inspector Joe Asbury of RCEHS confirmed that the fire had occurred as Mr. Charpied claimed.

Joe Asbury had also responded to the fire and was the individual who had discovered the PCBs at the fire. Joe Asbury oversaw the clean-up of the burned plant. RCEHS required the facility to clean the site. The clean-up standard for PCB contamination was "non-detect" (i.e. the contaminant concentration was lower than the ability of any chemical analytical method to detect and therefore presumably totally absent).

The fire was confined to the structure of the Beneficiation Plant. The Beneficiation Plant had been demolished since the fire. The Plant had been a steel structure; the steel was scrapped and sent to a metal recycler. Since the building no longer existed, it was agreed that there was nothing left to sample.

F. Fine Crusher

According to Lowell Ball, when the Fine Crusher was being demolished, a transformer containing PCBs was damaged and spilled PCBs to the ground. Kaiser's Gerry Fawcett concurred that the spill had occurred, but stated the site had been remediated and tested. Based on this information we decided that there was nothing at that site left for us to sample.

G. Scrap Staging Area

Next we went to the Scrap Staging Area. This area had been used to stage scrap metal and drums of material, prior to being shipped off-site for disposal or recycling. In this, area we observed several areas of surface staining. Mark Fuentes collected 3 co-located samples from an area of the surface staining. The samples were identified as "SC-1-A", "B", and "C". We gave the "B" sample to Rob Hartman and we kept the "A" & "C" samples. (Photos 17 & 18)

H. Main Shop Fueling Area (MSFA)

We then proceeded to the wash adjacent to the MSFA. John Fanning and I discovered what appeared to be a pile of course sand and gravel which was contaminated with a viscous petroleum hydrocarbon material. We also discovered what appeared to be a piece of a rusty drum, and more petroleum hydrocarbon staining. Mr. Fanning and I observed what appeared to be recent backhoe teeth marks in the location of the rusty drum piece. We also observed what appeared to be backhoe tracks in the same area. (Photos 19-26)

On the north side of the wash opposite the contaminated dirt pile, Mr. Fanning and I observed an area where some kind of hydrocarbon material appeared to have leaked from a tank and flowed down the bank of the wash. The material was dried and cracked giving the appearance that it had been spilled several years previously. Mr. Fanning and I climbed up the bank of the wash to trace the flow of the hydrocarbon material. On top of the bank where the hydrocarbon staining ended, we observed a circular excavation, which appeared to have been the location where a tank had been. We were unable to determine what the former tank had contained. We took no samples since laboratory analysis of such hydrocarbon materials typically shows them to be non-hazardous. (Photos 27-30)

I. Container Storage Area

We went to the hazardous waste container storage area (CSA). The CSA was located in the main vehicle maintenance shop. We observed small tanks and containers for accumulating waste oil and decommissioned electrical transformers for time periods less than 90 days. The area was bermed and lined with plastic tarps. These wastes were generated by ongoing vehicle maintenance and decommissioning of electrical transformers.

The CSA was the last location of the day that we inspected.

On February 11, 1994, we returned to the Eagle Mountain Mine to resume the sampling exercise.

J. Coarse Tailings Pile

The first location of the day we went to on the second day was the Coarse Tailings Pile. It was alleged that the coarse tailings were contaminated with hazardous constituents but were also being used to make asphalt as a

means of disposal. We went to the location where coarse tailings, destined to be made into asphalt, were being loaded into trucks. We observed no visible signs of contamination. I observed that the coarse tailings material was gravel, having the same visible characteristics as gravel-aggregate which is typically used for making asphalt. Mr. Charpied, Mr. Fanning and I agreed there was not enough evidence of any contamination to warrant taking a sample of the coarse tailings.

Mr. Fawcett said that the county road department had been buying the coarse tailings for years for use in making asphalt. Mr. Fawcett also said that the coarse tailings pile consisted of approximately ~~400,000~~ 6,000,000 tons of gravel material. => check w/ G. Faw

K. Fine Tailings Pond

We then proceeded to Fine Tailings Pond #6. Mr. Charpied selected a sampling location, and requested that we take a sample from a depth of approximately 12 inches. I used a hand auger to bore a hole to that depth. Using the hand auger, we collected 3 co-located samples from the requested depth. The samples were identified as "FTP-1-A", "B" & "C". I gave the "B" sample to Rob Hartman and retained custody of the "A" & "C" samples.

L. East Pit Storage Yard

The next site we inspected was the East Pit Storage Yard (EPSY). The EPSY had been used as a scrap and demolition debris accumulation area. I observed rubber conveyor belts, wood pallets, empty metal cans, and bits of scrap metal scattered around. According to Mr. Ball, waste oil and solvents had been disposed to the ground in the site. I asked him where the solvents and oil had been disposed. Mr. Ball said that the solvents and oils had been disposed all over the EPSY, and that one site was as representative as another. I chose a relatively rock free location for ease of sample collection. Mark Fuentes dug a 6 inch hole and collected three co-located samples. These samples were identified as "EPS-1-A", "B" & "C". I gave the "B" sample to Mr. Hartman and I retained custody of the "A" & "C" samples. (Photo 31)

M. East Pit Overburden Pile

We then walked over to the East Pit Overburden Pile (EPOP). Larry and Donna Charpied had discovered empty drums around the perimeter of the pile on a previous visit. I

observed that these same drums were empty. I observed no soil staining in the area of the drums. At one point, Joe Asbury and I observed a buried metal drum, which had been exposed by water erosion up on the side of the pile. Mr. Asbury and I climbed up the side of the pile to investigate the drum more closely. When we reached the drum, we observed that it was empty and had no residue inside. We then climbed up to the top of the pile. (Photo 32)

When we reached the top of the pile, we observed two trenches. Mr. Asbury informed me that they were two of the burn pits which the facility had used for burning trash and debris. We postponed any sampling until later in the afternoon.

N. Core Garden

We then proceeded to the vicinity of what is known as the Core Garden where rock core sample from the mine were stored in drums and in rows on the ground. Mr. Charpied's informant had made a map indicating that hundreds of barrels of waste had been buried at the terminus of the road leading to the Core Garden. According to Mr. Charpied, 200 barrels had been excavated in December, 1993, and several more hundred barrels had been reburied. We observed no hazardous waste, nor disturbed soils in the area of the Core Garden. Mr. Charpied investigated the area around a monitoring well which was a quarter mile north of the Core Garden, but he found no sign of any excavation in that area which was suggestive of buried drums.

O. Jenkinsville Site

We then proceeded to the Jenkinsville site. This had been a heavy equipment fueling and maintenance operation. Thirty to 40 pickup trucks and 20 flatbed trucks had been serviced here, including the Jenkins Truck which held 500 tons when fully loaded. The equipment maintenance site ceased operations in 1982 when the active mining operations ceased. At the fueling station, I observed a large area where some sort of petroleum hydrocarbon material had spilled onto the ground. The spilled material appeared to be dried out and cracked, indicating that it had been exposed to the weather for several years. (Photos 33-35)

P. Open Burn Pits

The final site that we inspected was the Open Burn Pit area located on top of the East Pit Overburden Pile. We observed ~~two~~ 3 open trenches which were oriented in an east-

west direction, and ~~six~~ 4 closed pits. Two of the previously closed pits had been partially reopened at the direction of RCEHS. Mark Fuentes collected two sets of three co-located soil samples from the trenches. The samples taken from the southern trench were identified as "OBP-1A", "1B", & "1C" and the samples taken from the northern trench were identified as "OPB-2A", "2B" & "2C". The samples were sealed with evidence tape. The "B" samples were given to Rob Hartman. The Charpieds signed the "C" samples evidence tape. I retained the "A" & "C" samples.

V. Sampling and Chain of Custody

Nine sets of three co-located soil samples were taken from the Shovel Storage Area, Eagle Creek Wash, Scrap Staging Area, Main Shop Fueling Area, Fine Tailings Pond, East Pit Storage Area, and Open Burn Pit.

All the "A" & "C" samples were placed in an ice chest, which I kept in the DTSC utility truck. At the end of the sampling operations, I drove the truck back to Long Beach. The truck was kept at my residence over the weekend. On Tuesday, February 15, 1994, I delivered the "A" samples to the DTSC Southern California Laboratory at 1449 Temple Street, Los Angeles. The samples were received by Janice Wakakuwa, who signed the chain of custody form. I retained custody of the "C" samples, and returned the "C" samples to my cubicle at 245 West Broadway, Long Beach. On February 17, 1994, I delivered the "C" samples to the E. S. Babcock & Sons Laboratory at 6100 Quail Valley Court, Riverside per the instructions of Mr. Charpied. The samples were received by Gail Traynor. The samples had remained chilled and sealed until they were received by the laboratory.

These samples were analyzed for pH, metals, semi-volatile organic constituents, volatile organic constituents, and PCBs based on the suspected hazardous waste that may have been disposed at each of the locations. According to laboratory analytical results, no hazardous waste constituents were detected in any of the samples with the exception of native heavy metals which were all well below the regulatory levels for toxicity. Sample EC-1-C showed very low levels of toluene and isopropyl toluene, and SC-1-C showed very low levels of n-butylbenzene, sec-butylbenzene, 1, 2, 4-trimethylbenzene and 1, 3, 5-trimethylbenzene for which there are no regulatory levels for being hazardous. The pH of the samples ranged between 6.1 and 7.4. A complete listing of locations, analytical parameters, and results is included in the Attachments.

III. Conclusions

Samples were taken from soils at levels ranging from 3 to 15 inches, which should be at sufficient depth to detect levels of volatile and semi-volatile organic compounds, heavy metals and PCBs. Results of the analyses do not indicate the presence of hazardous constituents above regulatory levels or thresholds for waste oil, solvents, acids, bases, heavy metals, PCBs, or industrial organic chemicals. Toluene + isopropyl toluene

Based on the sampling results and direct observations of the specified locations, the Department cannot find evidence to support the allegations that hazardous waste was disposed at the facility in sufficient quantities or with toxic characteristics so as to noticeably impact the environment, or to warrant a formal enforcement action against the facility. All of the potential hazardous waste disposal sites which were identified are located outside of the proposed landfill footprint. All the alleged sources of the hazardous wastes were from mining operations and processes that have not operated for over ten years. Based on this information, the environmental viability of this site as a Class III solid waste landfill and any potential hazardous waste disposal are independent issues.

The highest concentration of any hazardous constituent found in the tailings pond was approximately 600 mg/kg of copper. The California hazardous regulatory level for copper is 2,400 mg/kg total copper. Copper is not a federal RCRA hazardous constituent. The highest concentration of copper found in the fine tailings pond monitoring wells is 0.09 mg/l and typically the copper values are much lower. In the worst case, the copper concentration is only 10% of the "objectionable" standard for water quality. These findings corroborate U.S. EPA's rulemaking findings that beneficiation wastes are typically low toxicity and low mobility waste streams.

See Vol 2 EIR 20 years ago

Neither the analytical results nor the regulatory status of the fine tailings material would preclude it from being used as Class III landfill liner material. The current fine tailings ponds disposal sites were constructed to a lower environmental protection standard than were the proposed landfill; also, the tailings ponds held much more water than will be allowed into the landfill. Despite these two factors, the tailings ponds did not contaminate the groundwater. Therefore, it would seem unlikely that the fine tailings would contaminate the groundwater if they were used to line the proposed landfill.

Analytical Results

Sample ID & Location	Sample Type	Analytical Parameters	Results
SH-1-A Shovel area south	Soil	Metals 6010 Semi-volatiles pH	all ND* 6.9
EC-1-A Eagle Creek Wash dead grass shovel area	Soil	Metals 6010 Semi-volatiles 8270 pH	all ND* 7.2
SH-2-A Shovel area north	Soil	Metals 6010 Semi-volatiles 8270 pH	all ND* 6.8
SC-1-A Scrap staging area	Soil	Metals 6010 Semi-volatiles 8270 pH	all ND* 6.9
SC-2-A Main shop fueling area	Soil	Metals 6010 Semi-volatiles 8270 pH	all ND* 6.1
FTP-1-A Fine Tailings Pond	Soil	Metals 6010 Semi-volatiles 8270 pH	all ND* 7.2
EPS-1-A East Pit Storage Area	Soil	Semi-volatiles 8270 volatiles 8240 pH	all ND* ND 7.3
OBP-1-A Open Burn Pit	Soil	Semi-volatiles 8260 volatiles 8240 pH PCB's 8080	all ND* ND 7.0 ND
OBP-2-A Open Burn Pit	Soil	Semi-volatiles 8260 Volatiles 8240 pH PCB's 8080	all ND* ND 7.4 ND

C 8240

SAMPLE	Sb mg/kg	As mg/kg	Ba mg/kg	Be mg/kg	Cd mg/kg	Cr mg/kg	Co mg/kg	Cu mg/kg	Pb mg/kg	Mo mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Th mg/kg	V mg/kg	Zn mg/kg	Hg mg/kg
SH-1-A	ND	12.3	23.8	0.45	3.52	13.0	144	290	76.1	<3.75	15.9	<7.50	NA	<15.0	16.6	177	NA
B		9.5	15	ND	2	6.7	99	200	46	ND	15	ND	ND	ND	5.3	110	0.21
EC-1-A	NA	<5.00	112	0.94	1.63	17.3	36.9	108	23.4	<3.75	17.5	<7.5	NA	<15	43.5	129	NA
B	ND	4.4	110	ND	ND	15	38	120	25	ND	18	ND	ND	ND	30	130	1.9
C	ND	37	120	ND	ND	19	42	120	16	ND	20	ND	ND	ND	33	140	0.5
SH-2-A	NA	11.6	26.1	0.42	3.59	8.55	77.3	242	54.2	<3.75	11.4	<7.5	ND	<15.0	17.6	264	NA
B	ND	5.7	17	ND	2.5	6.7	48	170	30	ND	9.5	ND		ND	7	200	0.2
SC-1-A	NA	<5.00	38.3	0.41	0.59	7.4	27.9	52.5	11.4	<3.75	9.95	<7.5	ND	<15.0	26.2	67.7	NA
B	ND	2.6	39	ND	6.0	6.0	23	72	9.5	ND	8.9	ND	ND	ND	11	50	1.0
C	ND	16	45	ND	ND	ND	27	66	ND	ND	11	ND		ND	12	69	ND
SC-2-A	NA	12.4	68.5	0.54	4.32	20.3	112	273	68.1	<3.75	18.9	<7.5	ND	<15.0	23.5	487	NA
B	ND	7.6	74	ND	2.1	12	66	340	38	ND	13	ND		ND	12	410	0.56
FTP-1-A	NA	31.0	28.8	0.49	7.26	8.64	169	605	96.1	<3.75	21.3	<7.5	ND	<15.0	17.5	386	NA
B	ND	17	27	ND	4.0	9.5	150	530	54	ND	19	ND	ND	ND	9.7	310	.63
C	ND	55	30	ND	13	13	170	570	73	ND	25	22		ND	ND	370	ND
EPS-1-A	NA	<5.00	55.2	.48	0.49	7.16	8.06	26.9	6.70	<3.75	8.92	<7.5	NA	<15.0	34.7	30.9	NA
OBP-1-A	NA	16.6	66.2	0.62	4.96	17.1	126	429	46.6	<3.75	27.6	<7.5	ND	<15.0	29.2	166	NA
B	ND	5.0	44	ND	ND	7.3	86	190	38	ND	14	ND	ND	ND	9.5	140	.35
C	ND	32	77	ND	6	19	100	300	34	ND	ND	ND		ND	12	270	ND
OBP-2-B	ND	10.0	30	ND	ND	7.8	86	240	51	ND	13	ND	ND	ND	6.9	180	ND
TTLC mg/kg	500	500	10,000	10,000	100	2,500	8,000	2,500	1,000	3,500	2,000	100	500	700	2,400	5,000	20
STLC mg/l	5.0	5.0	100	100	1.0	5	80	25	5	350	20	1.0	5	7.0	24	250	0.2
Max. Conc. of "A" Samples	ND	12.1	49.83	0.48	2.93	11.92	86.57	251.82	48.18	<3.75	16.05	<7.5	ND	<15	23.97	209	ND
Exceeds CRSL		X		X													

VIII. Attachments

1. Sampling Plan
2. Sample Analysis Request and Chain of Custody Form for DTSC samples
3. Sample Analysis Report for pH analyses
4. Sample Analysis Report for PCBs
5. Sample Analysis Report for semi-volatiles
6. Chain of Custody Form for Charpied samples
7. Results of Magnetometer Profiles, memo
8. Photos
9. Sample Analysis Report for Metals
10. Landfill "Footprint" Map
11. HSC 25501(k)
12. HSC 25117
13. HSC 25141
14. title 22, Cal. Code Regs., section 66261
15. Federal Register Sept. 1, 1989
16. 40 CFR 261.4(b)(7)
17. HSC 25143.1(b)
18. title 22, Cal. Code Regs., section 64473
19. Mailing List

Richard Hubbell
Richard Hubbell
Associate Hazardous Materials Specialist
Surveillance & Enforcement Branch

4/7/94
Prepared Date

Sharon Fair
Sharon Fair
Unit Chief
Surveillance & Enforcement Branch

4/7/94
Date Reviewed

COUNTY OF RIVERSIDE • HEALTH SERVICES AGENCY
DEPARTMENT OF ENVIRONMENTAL HEALTH

December 16, 1993

State of California
Department of Toxic Substances Control
Sharon Fair, Unit Chief
245 West Broadway, Suite 350
Long Beach, CA 90802

RE: Joint Facility Inspection - Eagle Mountain Mine/Kaiser Steel Resources Desert Center

Dear Ms. Fair:

The Riverside County, Health Services Agency, Department of Environmental Health requests your participation in a joint site evaluation for the purpose of determining if any hazardous waste has been improperly disposed of at the proposed regional landfill project known as Eagle Mountain Mine, Desert Center, California.

Your Department will be provided with all of the documentation and allegations relating to this issue to date. I believe that it would be appropriate to have a pre-site work plan for the on-site review. We are developing a preliminary work plan and will fax this draft plan to your office for review and comment. It is anticipated that the first week in January will be the target date for the on-site inspection.

I have communicated with your office this date and spoke to Ms. Sue Hakiem regarding this request. She has advised me that you would be the person coordinating CAL-EPA Toxics' participation on this project. I have also contacted the Region 3 Toxics office to request the assistance of Mr. Dennis Dickerson, Ombudsman. I realize that Mr. Dickerson is out of the Region 3 office, however, in the absence of Mr. John Hinton, Ombudsman from your office, Dennis has agreed to participate.

Thank you in advance for your assistance in this matter. I am trying to set up a meeting early next week to review and coordinate the work plan

Sincerely,

John M. Fanning

John M Fanning, Director
Department of Environmental Health

JMF:rz

cc Kenneth B. Cohen, Director, Health Services Agency
Dennis Dickerson, Region 3 Toxics
Margaret Szczepaniak, Assistant Public Health Administrator, Special Services
Larry Parrish, County Administrative Officer
Gerry Fawcett, Kaiser Resources, Inc.

ATTACHMENT 1

SAMPLING PLAN

Eagle Mountain Mine
(EMM)
Desert Center, CA 92239
EPA ID# CAD003934890

Date of Plan: February 3, 1994
Expected Date of Sampling: February 10 & 11, 1994

I. Purpose

The purpose of this sampling operation is to identify hazardous waste streams disposed at the EMM site.

II. Items to be Sampled

The following items will be sampled:

	Location	Sample Type	Parameters
A.	"Jenkinville" site	Soil	TPH metals
B.	Car Trench	Soil	solvents, semi-volatiles, PCB's
C.	Pit Dump	inaccessible site	
D.	Scrap Yard	Soil	TPH metals
E.	Main Shop drain	sludge/soil	PCB's
F.	9% Equipment storage	Soil	TPH metals
G.	"Lay-Down" area	Soil	TPH, solvent metals
H.	Coarse Tailings/asphalt	Soil	TPH, solvents PCB's

(Site Map Attached)

III. Sampling Team:

Richard Hubbell, DTSC, SEB, Site Safety Officer and Lead Sampler
Mark Fuentes, Sampler
Chris Guerre, Documenter
Sharon Fair, Supervisor

IV. Equipment:

A. Safety Equipment:

1. Poly tyvek coveralls, large
2. Safety goggles
3. Hard hats
4. Nitrile gloves
5. Respirators
6. GMC-H respirator cartridges

7. Boots
8. Duct tape
9. Drinking water
10. Hudson sprayer for decon
11. Kimwipes
12. Hand cleaner, waterless
13. Water jugs
14. Water canteens
15. Binoculars
16. Cotton Gloves
17. Ludlum Radiation Meter
18. Hnu

B. Sampling Equipment:

1. Hand auger with trap door
2. Wide mouth sample jars, 48
3. Marking board
4. Dry erase marker
5. Sharpie marker
6. Card table
7. Ice chests, 2X
8. Scoops
9. Camera
10. Film
11. Teflon scoops
12. Round Point Shovel

VI. Sampling Procedures

All locations visited by the sampling team will be surveyed for radiation prior to any work being performed.

A. "Jenkinville" site

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole.

B. Car Trench

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole. This area will be surveyed using a magnetometer to locate areas where drums may have been buried.

C. Pit Dump Inaccessible

D. Scrap Yard

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole.

E. Main Shop drain

The sampling team will try to determine where the drain led to and sample that location. Any visible contamination in the drain area will be sampled using a scoop to collect the sample. The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole.

F. 9% Equipment storage

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole.

G. "Lay-Down" area

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and checking for vapors in the borehole.

H. Coarse Tailings/asphalt

The site will be visually surveyed for surface oil stains and also it will be surveyed for any vapors using a photoionization detector (Hnu). Areas of surface staining will be sampled using teflon scoops. If there is evidence of recent soil disturbance in locations suspected of contamination soil will be sampled using the auger and

checking for vapors in the borehole. The pile will also be surveyed using a magnetometer to locate buried drums.

VII. Special Safety Considerations

1. Ionizing Radiation

It has been alleged that radioactive sources may have been disposed at the site. The work areas will be surveyed using a Ludlum radiation meter. Any locations having greater than .05mREM/hour will be noted and the survey team will evacuate to areas with less than .05mREM/hour. Radioactive areas will be referred to the Department of Health Services Radiologic Health Branch for follow-up.

2. Chemical Hazards

The main chemical hazards would be solvents, waste oil, and PCB's which samples may inhale or come in contact with when handling the samples. Gloves, chemical resistant boots, and Tyvek will be used to prevent physical contact with the samples. The Hnu will be used to survey work areas to identify areas where solvent vapors may be present. In those areas, the sampling team will wear full face respirators equipped with GMC-H cartridges to prevent inhalation of solvent vapors.

Local sources of drinking water contain high levels of arsenic, fluoride and nitrate. The sampling team will be required to bring fresh drinking water.

3. Deconning

The sampling sites are generally not supplied with sources of fresh water for washing boots and respirators. A Hudson sprayer will be brought to each sampling site for deconning the respirators. The boots will be protected by disposable boots covers to minimize the need for washing them.

VIII. Attachments

A. Facility and hospital location map
B. Lab analysis request form
C. HARP
D. Chain of custody form

Richard Hubbell
Richard Hubbell
Associate Hazardous Materials Specialist
Surveillance & Enforcement Branch

2/1/94
Prepared Date

Sharon Fair
Sharon Fair
Unit Chief
Surveillance & Enforcement Branch

2/2/94
Date Reviewed

ATTACHMENT 2

State of California Health and Welfare Agency

Department of Health Services
Hazardous Materials Laboratory

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

1. Authorization Number: 5 C J 2 0 2 1

HML No.

To

Page 1 of 1

3 Requestor: Rich Hubbell, DTSC 4. Phone (8) 435-5920

Address (To Receive Results): 245 W Broadway #425, Long Beach, CA 90802

5. Priority [2]
a. Authorized by

6. Date Sampled 2/16+17/94 7. Time Sampled • Hours

8. Codes (fill in all applicable codes)

a. STC	3	0	8	2				
b. Region	0	4						
c. TPC								
d. INDEX	6	4	1	0				
e. PCA	3	6	3	2	0			
f. SITE								
g. County	0	3	3					

9. Activity: [x] SEB [ ] SMB [ ] FPB [ ] ATD [ ] PASD [ ] Other

10. SAMPLING LOCATION

a. EPA ID No. C A D 0 0 3 9 3 4 8 4 0

b. Site Eagle Mountain Mine

c. Address Eagle Mtn Mine, Desert Center 92239
Number Street City Zip

11. SAMPLES

a. ID	b. Collector's No.	c. Lab No.	d. Sample Type	e. Container Type	f. Container Size	g. Field Information
A	SH-1-A	13479	Soil	glass	16oz	Shovel Area
B	EC-1A	13480	"	"	"	Eagle Creek LC
C	SH-2A	13481	"	"	"	Shovel Area
D	SC-1A	13482	"	"	"	Scrap Stage + LC
E	SC-2A	13483	"	"	"	Main Shed LC
F	FM-1A	13484	"	"	"	Fine Tailings
G	EP-1A	13485	"	"	"	East Pit Stage
H	CM-1A	13486	"	"	"	Open Room LC

12. ANALYSIS REQUESTED

a. [x] pH
b. [x] Metal Scan A, B, C, D, E, F
c. [ ] Metals (Spec)
d. [ ] W.E.T.
f. [x] PCB H
g. [ ] VOA-H/S
h. [x] VOA-8240 G, H
i. [ ] VOA-8260
j. [x] SVO-8270 A, B, C, D, E, G, I
k. [ ] Ext. Org (Screening)
i. [ ] Flash Point
m. [ ]
n. [ ]
o. [ ]

13. SUPPLEMENTAL REQUESTS [ ] [ ] [ ] [ ] Initials Date

14. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	[signature]	Richard Hubbell AHMS	2/16/94
b.	[signature]	Janice Wakakuwa/PHS II	2/15/94
c.			/ / - / /
d.			/ / - / /

15. SPECIAL REMARKS:

16. ASSIGNED TO: Date

17. LAB REMARKS:

DHS 8702 (Rev 10/90) Original Lab • Duplicate File • Triplicate Inspector

State of California Health and Wellare Agency

Department of Health Services
Hazardous Materials Laboratory

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

1. Authorization Number: SCJ2021

HML No.

To

Page of

3 Requestor: Rick Kimball

Address (To Receive Results): 245 W. Broadway Suite 1 Long Beach CA 90802

4. Phone (714) 435-3923

5. Priority ☒

a. Authorized by

6. Date Sampled 2/10/94

7. Time Sampled • Hours

8. Codes (fill in all applicable codes)

a. STC 3485

b. Region 09

c. TPC

d. INDEX 0401

e. PCA 3E30

f. SITE

g. County 033

9. Activity: ☒ SEB ☐ SMB ☐ FPB ☐ ATD ☐ PASD ☐ Other

10. SAMPLING LOCATION

a. EPA ID No. CAD 098 343 454

b. Site Eagle Mountain Mine

c. Address Eagle Mtn Mine, Desert Center 92239
Number Street City Zip

11. SAMPLES

a. ID	b. Collector's No.	c. Lab No.	Sample d. Type	Container e. Type	Container f. Size	g. Field Information
A	OPB-2A	13480A	Soil	glass	1 oz	Open Pit
B						
C						
D						
E						
F						
G						
H						

12. ANALYSIS REQUESTED

a. ☐ pH
b. ☐ Metal Scan
c. ☐ Metals (Spec)
d. ☐ W.E.T.
e. ☐ PCB — A
f. ☒ PCB — A
g. ☐ VOA-H/S
h. ☒ VOA-8240 — A
i. ☐ VOA-8260
j. ☒ SVO-8270 — A
k. ☐ Ext. Org (Screening)
l. ☐ Flash Point
m. ☐
n. ☐
o. ☐

13. SUPPLEMENTAL REQUESTS

Initials

Date

14. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a	[signature]	Richard Kimball / AHMS	2/11 - / /
b	[signature]	Janice Wakakuwa / PHCIII	2/15/94 / /
c			/ / - / /
d			/ / - / /

15. SPECIAL REMARKS:

16. ASSIGNED TO: Date

17. LAB REMARKS:

ATTACHMENT 3

LABORATORY REPORT
Hazardous Materials Laboratory - Southern California
1449 Temple Street Los Angeles Ca. 90026
Telephone 213-620-3376

To :Rich Hubbell SCL No. ;13479-13486A

Sampling No : see below Date ;02/28/94

Sample Location :Eagle Mountain Mine
Eagle Mountain Mine, Desert Center,92237

Analytical Procedures Used : HML 407-S (FOR DRY SOLIDS)
EPA 9045 (FOR THE pH)

Analysis Results

SCL NO.	COLLECTOR'S NO.	% DRY SOLIDS	pH	TEMPERATURE °C FOR pH
13479	SH-1A	96	6.9	22.5
13480	EC-1A	92	7.2	22.5
13481	HS-2A	94	6.8	22.5
13482	SC-1A	98	6.9	22.5
13483	SC-2A	98	6.1	22.5
13484	FTP-1A	94	7.2	22.5
13485	EPS-1A	98	7.3	22.5
13486	OBP-1A	98	7.0	22.5
13486A	OPB-2A	98	7.4	22.5

Analyst's Signatures:

Prem S Hira — 3/1/94 Date

Supervising Chemist's Signature:

Janice Wakakuwa — 3/2/94 Date

ATTACHMENT 4

LABORATORY REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

COLLECTOR'S NAME: RICH HUBBELL

SCL NO. : 13486-13486A

DATE REPORTED : 02/22/94

SAMPLE LOCATION : EAGLE MOUNTAIN MINE
DESERT CENTER

ANALYTICAL PROCEDURES USED: EPA 8081 GC/ECD FOR ANALYSIS
EPA 3540 SOXHLET EXTRACTION

PCBs ANALYSIS

ANALYTE	SCL NO.	13486	13486A	QUANTITATION LIMIT
	COL. NO.	OBP-1A	OPB-2A	13486 13486A
	MATRIX	SOIL	SOIL	
	UNITS	MG/KG	MG/KG	
PCB 1016 CAS NO. 12674-11-2		ND	ND	0.5
PCB 1221 CAS NO. 11104-28-2		ND	ND	0.5
PCB 1232 CAS NO. 11141-16-5		ND	ND	0.5
PCB 1242 CAS NO. 53469-21-9		ND	ND	0.5
PCB 1248 CAS NO. 12672-29-6		ND	ND	0.5
PCB 1254 CAS NO. 11097-69-1		ND	ND	0.5
PCB 1260 CAS NO. 11096-82-5		ND	ND	0.5
PCB 1262 CAS NO. 37324-23-5		ND	ND	0.5

Note: ND = NOT DETECTED

QUANTITATION LIMIT =
(CONCENTRATION OF LOWEST CALIBRATION STANDARD) X (DILUTION FACTOR)

SAMPLE PREPARATION: ANALYST SUPERVISING CHEMIST

MONINA LIGAO 3/3/94 DATE MONINA LIGAO 3/3/94 DATE RUSS CHIN

QUALITY CONTROL (QC) REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERAILS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

COLLECTOR'S NAME : RICH HUBBELL

DATE SAMPLE RECEIVED: 02/15/94

SAMPLING LOCATION: EAGLE MOUNTAIN MINE

DESERT CENTER, CA 92237

DATE SAMPLE PREPARED: 02/16/94 - 02/18/94

ANALYTICAL BATCH LAB ID NO.: SCL 13486 - 13486A

ANALYTICAL PROCEDURES USED: EPA METHOD 8081 GC/ECD FOR PCB ANALYSIS
EPA METHOD 3540 SOXHLET EXTRACTION

DATE SAMPLE ANALYZED: 02/18/94

QC REPORT FOR

A: METHOD BLANK
B: METHOD STANDARD RECOVERY
C: LABORATORY CONTROL SAMPLE - LCS1187PCB
D: SAMPLE DUPLICATE ANALYSIS

	A	B		C		D			
		METHOD STANDARD		LABORATORY CONTROL SAMPLE		DUPLICATE SAMPLE ANALYSIS Performed on SCL 13486A			
	METHOD BLANK	RECOVERY	CONTROL LIMIT	Found	Control limit		RUN 1	Run 2	RPD
COMPOUND	mg/kg	%	%	mg/kg	mg/kg		mg/kg	mg/kg	%
PCB 1016	<0.5					NO DATA	-	-	
PCB 1221	<0.5					(NO PCBS DETECTED)			
PCB 1232	<0.5								
PCB 1242	<0.5								
PCB 1248	<0.5								
PCB 1254	<0.5								
PCB 1260	<0.5	104	78.8-120	15	11.0 -16.4				
PCB 1262	<0.5							CONTROL LIMIT	

NDT = NOT DETERMINED YET

SAMPLE PREPARATION

Monina Ligao 3/2/94
MONINA LIGAO DATE

ANALYST

Monina Ligao 3/3/94
MONINA LIGAO DATE

SUPERVISING CHEMIST

RUSS CHIN DATE

QUALITY CONTROL (QC) REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

COLLECTOR'S NAME : RICH HUBBELL

DATE SAMPLE RECEIVED:02/15/94

SAMPLING LOCATION: EAGLE MOUNTAIN MINE

DESERT CENTER, CA 92237

DATE SAMPLE PREPARED:02/16/94 02/18/94

ANALYTICAL BATCH LAB ID NO.: SCL 13486 - 13486A

ANALYTICAL PROCEDURES USED: EPA METHOD 8081 GC/ECD FOR PCB ANALYSIS
EPA METHOD 3540 SOXHLET EXTRACTION

DATE SAMPLE ANALYZED:02/18/94

QC REPORT FOR
MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) PERCENT RECOVERY

MATRIX SPIKE PERFORMED ON SCL 13486A TYPE OF MATRIX SOIL TYPE OF SPIKED PCB 1260

COMPOUND	AMOUNT OF ANALYTE IN SAMPLE	AMOUNT ANALYTE ADDED	MATRIX SPIKE		MATRIX SPIKE DUPLICATE		AVE	CONTROL LIMITS FOR	R	CONTROL LIMITS FOR
			AMOUNT RECOVERED	% REC	AMOUNT RECOVERED	% REC	% REC	% REC	% D BETWEEN MS/MSD	RPD
	mg/kg	mg/kg	mg/kg	%	mg/kg	%	%	%	%	
PCB 1260	<0.5	100	115	115	119	119	117	72.0-122	3.4	

NOTE: NDY = NOT DETERMINED YET

SAMPLE PREPARATION:

Monina Ligao 3/3/94
MONINA LIGAO DATE

ANALYST:

Monina Ligao 3/3/94
MONINA LIGAO DATE

SUPERVISING CHEMIST:

RUSS CHIN DATE

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 W. TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

CASE NARRATIVE

1. THIS ANALYTICAL REPORT PACKAGE WAS PREPARED FOR SCL SAMPLES 13486 - 13486A

2. SAMPLES WERE COLLECTED ON 02/10/94 - 02/11/94 AT EAGLE MOUNTAIN MINE

3. COLLECTOR'S NAME ON THE SAMPLE ANALYSIS REQUEST FORM IS RICH HUBBELL

4. SAMPLES WERE :

   RECEIVED ON 02/15/94

   EXTRACTED ON 02/16/94 - 02/18/94 BY EPA METHOD 3540 (SOXHLET EXTRACTION)

   ANALYZED ON 02/18/94 BY EPA METHOD 8081 (PCB ANALYSIS)

   DATA PACKAGE WAS COMPLETED ON 02/22/94

5. NO MAJOR PROBLEMS WERE ENCOUNTERED DURING THE COURSE OF THESE ANALYSES.

6. QC PARAMETERS/INDICATORS WERE WITHIN ESTABLISHED CONTROL LIMITS.

7. INSTRUMENT INITIAL CALIBRATION & CONTINUING CALIBRATION CRITERIA WERE MET.

8. SAMPLE HOLDING TIMES WERE MET.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

INDEX

EPA 8081 FOR SCL 13486-13486A

TOTAL PAGES = 7

ATTACHMENT 5

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

CASE NARRATIVE

1. THIS ANALYTICAL REPORT PACKAGE WAS PREPARED FOR SCL SAMPLES 13479,13480,13481,13482 13483,13485,13486,13486A

2. SAMPLES WERE COLLECTED ON 02/10,11/94 AT EAGLE MOUNTAIN MINE EAGLE MOUNTAIN MINE DESERT CENTER 92237

3. COLLECTOR'S NAME ON THE SAMPLE ANALYSIS REQUEST FORM IS RICHARD HUBBELL

4. SAMPLES WERE :

   RECEIVED ON 02/15/94

   EXTRACTED ON 02/17-23/94 BY EPA METHOD 3540 (SOXHLET EXTRACTION)

   CLEANEDUP ON 02/23/94 BY EPA METHOD 3640 (GEL PERMEATION COLUMN)

   ANALYZED ON 02/24,25/94 BY EPA METHOD 8270 (SEMIVOLATILE ORGANICS)

   DATA PACKAGE WAS COMPLETED ON 02/25/94

5. NO MAJOR PROBLEMS WERE ENCOUNTERED DURING THE COURSE OF THESE ANALYSES.

6. ALL QC PARAMETERS/INDICATORS WERE WITHIN CONTROL LIMITS.

7. INSTRUMENT INITIAL CALIBRATION & CONTINUING CALIBRATION CRITERIA WERE MET.

8. HOLDING TIMES WERE MET.

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

INDEX

(EPA 8270 FOR SCL 13479,13480,13481,13482,13483,13485,13486,13486A)

TOTAL PAGES = 10

State of California Health and Welfare Agency

Department of [illegible]
Hazardous Mat[illegible]

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

1. Authorization Number: SC J 2 0 2 1

HML No. / To

3 Requestor: Rich Hubbell, DTSC 4. Phone (8)619-5420

Address (To Receive Results): 245 W Broadway #425, Long Beach CA 90802

5. Priority [2]
a. Authorized by

6. Date Sampled 2/10/94 7. Time Sampled Hours

8. Codes (fill in all applicable codes)

a. STC	3	0	5	0				
b. Region	0	4						
c. TPC								
d. INDEX	6	4	1	0				
e. PCA	3	6	3	2	0			
f. SITE								
g. County	0	3	3					

9. Activity: [X] SEB [ ] SMB [ ] FPB [ ] ATD [ ] PASD [ ] Other

10. SAMPLING LOCATION

a. EPA ID No. C A D 0 0 3 9 3 4 8 9 0

b. Site Eagle Mountain Mine

c. Address Eagle Mtn Mine, Desert Center 92239
(Number, Street, City, Zip)

11. SAMPLES

a. ID	b. Collector's No.	c. Lab No.	d. Sample Type	e. Container Type	f. Container Size	g. Field Information
A	SH-1-A	13479	Soil	glass	16oz	Shovel Acr...
B	EC-1A	13480	"	"	"	Pad 4 Creek ...
C	SH-2A	13481	"	"	"	Shovel Acr...
D	SC-1A	13482	"	"	"	Scrap Stgi ...
E	SC2A	13483	"	"	"	Main Shop ...
F	EP-1A	13484	"	"	"	Office Ta...
G	EP-1A	13485	"	"	"	East Pit Sump
H	CSP-1A	13486	"	"	"	Open Barn C...

12. ANALYSIS REQUESTED

a. [ ] pH
b. [X] Metal Scan: A, B, C, D, E, F
c. [ ] Metals (Spec)
d. [ ] W.E.T.
f. [X] PCB
g. [ ] VOA-H/S
h. [X] VOA-8240: G, H
i. [ ] VOA-8260
j. [X] SVO-8270: A, B, C, D, E, G, H
k. [ ] Ext. Org (Screening)
l. [ ] Flash Point
m. [ ]
n. [ ]
o. [ ]

13. SUPPLEMENTAL REQUESTS Initials Date

14. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a.	[signature]	Richard Hubbell AHMS	2/10/94
b.	[signature]	Janice Wakefield/PHS/EH	2/15/94
c.			/ /
d.			/ /

15. SPECIAL REMARKS:

16. ASSIGNED TO: Date

17. LAB REMARKS:

State of California Health and Welfare Agency

Department of Health Services
Hazardous Materials Laboratory

HAZARDOUS MATERIALS SAMPLE ANALYSIS REQUEST

1. Authorization Number: 5 C T 2 C 2 1

HML No.
To

3. Requestor: Rich Hubbell
Address (To Receive Results): 245 W. Broadway #?, Long Beach CA 90802

4. Phone (310) 5?? - ????

5. Priority [2]
a. Authorized by ______

6. Date Sampled 2/14/94

7. Time Sampled · Hours

8. Codes (fill in all applicable codes)

a. STC	3 4 5 ?
b. Region	3 4
c. TPC	
d. INDEX	3 4 1 ?
e. PCA	2 6 3 ?
f. SITE	
g. County	1 3 3

9. Activity: ☒ SEB ☐ SMB ☐ FPB ☐ ATD ☐ PASD ☐ Other

10. SAMPLING LOCATION CAD 0 0 9 3 4 8 4 ?

a. EPA ID No.

b. Site Eagle Mountain Mine

c. Address Eagle Mtn Mine, Desert Center 92239
Number Street City Zip

11. SAMPLES

a. ID	b. Collector's No.	c. Lab No.	Sample d. Type	Container e. Type	Container f. Size	g. Field Information
A	OFB-2 A	13436A	Soil	glass	16 oz.	Open Burn Pit
B						
C						
D						
E						
F						
G						
H						

12. ANALYSIS REQUESTED

a. ☐ pH
b. ☐ Metal Scan
c. ☐ Metals (Spec)
d. ☐ W.E.T.
f. ☒ PCB A
g. ☐ VOA-H/S
h. ☒ VOA-8240 A
i. ☐ VOA-8260
j. ☒ SVO-8270 A
k. ☐ Ext. Org (Screening)
l. ☐ Flash Point
m. ☐
n. ☐
o. ☐

13. SUPPLEMENTAL REQUESTS ☐ ☐ ☐ ☐
Initials ______
Date ______

14. CHAIN OF CUSTODY

	Signature	Name/Title	Inclusive Dates
a	Richard Hubbell	Richard Hubbell AHMS	2/11 / 2/15
b	Janice Wakakura	Janice Wakakura / PHCT II	2/15/94 /
c			/ / - /
d			/ / - /

15. SPECIAL REMARKS:

16. ASSIGNED TO: Date

17. LAB REMARKS:

ATTACHMENT 11

California Environmental Protection Agency
Department of Toxic Substances Control
Hazardous Materials Laboratory (Inorganic Section)
151 Berkeley Way, Berkeley, CA 94704

Phone: (510) 540-3003 or (ATSS) 571-3003

HML #: 931188 to 931195

Collector's Name: RICH HUBBEL
Site of Sampling: EAGLE MOUNTAIN MINE
EAGLE MOUNTAIN MINE
DESERT CITY, 92239

Auth. No.: HMJ2021
Activity : SEB
Date Collected: 2/10
Date Received: 3/9/94

Analytical Procedure: EPA-SW 846

Samples are digested with 1:1 HNO3 (and 30% H2O2, and 1:1 HCl, if applicable) over a hot plate. Digests are cooled, filtered and made to final volume with deionized H2O. Metal analysis of the digests is by ICPAES (EPA #6010). Units are mg/kg.

Method: 3050 for solids; 3010 for liquids; 3005 for clean water.

HML Number:	931193	931194	931195
Collector's Sample No.:	ETP-1-A	EPS-1-A	OBP-1-A
Sample Type:	SOIL	SOIL	SOIL
Arsenic	31.0	<5.00	16.6
Barium	28.8	55.2	66.2
Beryllium	0.49	0.48	0.62
Cadmium	7.26	0.49	4.96
Cobalt	161	8.06	126
Chromium	8.64	7.16	17.1
Copper	605	26.9	429
Molybdenum	<3.75	<3.75	<3.75
Nickel	21.3	8.92	27.6
Lead	96.1	6.70	46.6
Selenium	<7.50	<7.50	<7.50
Thallium	<15.0	<15.0	<15.0
Vanadium	17.5	34.7	29.2
Zinc	386	30.9	166

Notes: < - below detection limit of method.

Marilyn de Guzman 3/25/94
ICP Analyst, Marilyn de Guzman Date

Zenaida Odion 3/31/94
Chemist's Signature Date
Zenaida Odion, Chemist

Milad S. Iskander, Supervisor 4/4/94
Date

ATTACHMENT 10

"business" includes a business organized for profit and a nonprofit business.

(e) "Business plan" means a separate plan for each facility, site, or branch of a business which meets the requirements of Section 25504.

(f) "Chemical name" means the scientific designation of a substance in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry or the system developed by the Chemical Abstracts Service.

(g) "Common name" means any designation or identification, such as a code name, code number, trade name, or brand name, used to identify a substance other than by its chemical name.

(h) "Department" means the State Department of Health Services and "director" means the State Director of Health Services.

(i) "Handle" means to use, generate, process, produce, package, treat, store, emit, discharge, or dispose of a hazardous material in any fashion.

(j) "Handler" means any business which handles a hazardous material.

(k) "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

(l) "Hazardous substance" means any substance or chemical product for which one of the following applies:

(1) The manufacturer or producer is required to prepare a MSDS for the substance or product pursuant to the Hazardous Substances Information and Training Act (Chapter 2.5 (commencing with Section 6360) of Part 1 of Division 5 of the Labor Code) or pursuant to any applicable federal law or regulation.

(2) The substance is listed as a radioactive material in Appendix B of Chapter 1 of Title 10 of the Code of Federal Regulations, maintained and updated by the Nuclear Regulatory Commission.

(3) The substances listed pursuant to Title 49 of the Code of Federal Regulations.

(4) The materials listed in subdivision (b) of Section 6382 of the Labor Code.

(m) "Hazardous waste" means hazardous waste, as defined by Sections 25115, 25117, and 25316.

(n) "Office" means the Office of Emergency Services.

(o) "Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, unless permitted or authorized by a regulatory agency.

(p) "SIC Code" means the identification number assigned by the Standard Industrial Classification Manual to specific types of businesses.

(q) "Threatened release" means a release creating a substantial probability of harm, where the probability and potential extent of harm make it reasonably necessary to take immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment.

(r) "Emergency rescue personnel" means any public employee, including, but not limited to, a fireman, firefighter, or emergency rescue personnel defined in Section 245.1 of the Penal Code, or personnel of a local EMS agency, as designated pursuant to Section 1797.200, or a poison control center, as defined in Section 1797.97, who responds to any condition caused in whole or in part, by a hazardous material that jeopardizes, or could jeopardize, public health or safety or the environment.

(s) "City" includes any city and county.

(t) "Trade secret" means trade secrets as defined in subdivision (d) of Section 6254.7 of the Government Code and Section 1060 of the Evidence Code.

(Amended by Stats. 1990, Ch. 1662.)

25501.1. Notwithstanding Section 25501, for purposes of this chapter, a hazardous substance specified in paragraph (3) of subdivision (k) of Section 25501 means those hazardous materials or substances listed in Parts 172 and 173 of Title 49 of the Code of Federal Regulations.

(Added by Stats. 1986, Ch. 463.)

25501.2. For purposes of the inventory requirements of this chapter, "store," as used in subdivision (h) of Section 25501, does not include the storage of hazardous materials which are in transit (or which are temporarily maintained in a fixed facility) for a period of less than 30 days during the course of transportation.

(Added by Stats. 1986, Ch. 463.)

25501.3. "Handle" also means the use or potential for use of a quantity of hazardous material in the connection of any marine vessel, tank vehicle, tank car, or container to a system or process for any purpose other than the immediate transfer to or from an approved atmospheric tank or approved portable tank.

(Added by Stats. 1991, Ch. 1183)

25501.4. (a) Notwithstanding subdivision (c) of Section 25501, "business" also includes the federal government, to the extent authorized by federal law, and any agency, department, office, board, commission, or bureau of state government, including, but not limited to, the campuses of the California Community Colleges, the

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disposal, or handling of hazardous waste or hazardous materials in the three years preceding the filing of the disclosure statement.

(8) A listing and explanation of any federal or state conviction, judgment, or settlement, in the three years immediately preceding the filing of the statement, with any remedial actions or resolutions if applicable, relating to the generation, transportation, treatment, storage, recycling, disposal, or handling of hazardous waste or hazardous materials by the applicant, or by the applicant under any previous name or names, or if the applicant is a business concern, by any officer, director, or partner of the business concern.

(9) A listing of all owners, officers, directors, trustees, and partners of the applicant who have owned, or been an officer, director, trustee, or partner of, any company which generated, transported, treated, stored, recycled, disposed of, or handled hazardous wastes or hazardous materials and which was the subject of any of the actions described in paragraphs (6) and (8) for the three years preceding the filing of the statement.

(b) In lieu of the statement specified in subdivision (a), a corporation, the stock of which is listed on a national securities exchange and registered under the Securities Exchange Act of 1934 (15 U.S.C. Sec. 78a et seq.), or a subsidiary of such a corporation, may submit to the department copies of all periodic reports, including, but not limited to, those reports required by Section 78m of Title 15 of the United States Code and Part 229 (commencing with Section 229.10) of Chapter II of Title 17 of the Code of Federal Regulations which the corporation or subsidiary has filed with the Securities and Exchange Commission in the three years immediately preceding the submittal, if the corporation or subsidiary or root has held a hazardous waste facility permit or operated a hazardous waste facility under interim status pursuant to Section 25200 or 25200.5 since January 1, 1984.

(Added by Stats. 1989, Ch. 1257.)

25113. (a) "Disposal" means either of the following:

(1) The discharge, deposit, injection, dumping, spilling, leaking, or placing of any waste so that the waste or any constituent of the waste is or may be emitted into the air or discharged into or on any land or waters, including groundwaters, or may otherwise enter the environment.

(2) The abandonment of any waste.

(b) The amendment of the section made at the 1989-90 Regular Session of the Legislature does not constitute a change in, but is declaratory of, the existing law.

(Amended by Stats. 1989, Ch. 1436.)

25114. "Disposal site" means the location where any final deposition of hazardous waste occurs.

(Amended by Stats. 1977, Ch. 1039.)

25115. "Extremely hazardous waste" means any hazardous waste or mixture of hazardous wastes which if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the hazardous waste or mixture of hazardous waste because of its quantity, concentration, or chemical characteristics.

(Amended by Stats. 1977, Ch. 1039.)

25115.1. "Federal act" means the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. Sec. 6901 et seq.).

(Added by Stats. 1988, Ch. 1061.)

25116. "Handling" means the transporting or transferring from one place to another, or pumping, processing, storing, or packaging of hazardous waste, but does not include the handling of any substance before it becomes a waste.

(Amended by Stats. 1980, Ch. 878.)

25116.5. (Repealed by Stats. 1986, Ch. 1187.)

25117. (a) "Hazardous waste" means either of the following:

(1) A waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either:

(A) Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

(B) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

(2) A waste which meets any of the criteria for the identification of a hazardous waste adopted by the department pursuant to Section 25141.

(b) "Hazardous waste" includes, but is not limited to, RCRA hazardous waste.

(c) Unless expressly provided otherwise, the term "hazardous waste" shall be understood to also include extremely hazardous waste and acutely hazardous waste.

(Amended by Stats. 1989, Ch. 1436.)

25117.1. "Hazardous waste facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for the treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous waste. A hazardous waste facility may consist of one or more treatment, transfer, storage, resource recovery, disposal, or recycling hazardous waste management units, or combinations of these units.

(Amended by Stats. 1990, Ch. 1686.)

25117.2. "Hazardous waste management" or "management" means the transportation, transfer

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in achieving operational status, including a timetable for becoming operational.

(3) An assessment of the need for additional hazardous waste facilities to manage the volumes of hazardous waste currently produced or which are expected to be produced during the next 20 years.

(4) An identification of the area or regions of the state where new or expanded capacity to manage hazardous wastes are needed and the types of facilities that should be sited and constructed.

(5) A description of the policies, programs, incentives, requirements, prohibitions, or other measures which, if implemented, would reduce or eliminate the need for new or expanded facilities.

(6) A statement of goals, objectives, and policies currently in effect, or in the process of development, for the siting of hazardous waste facilities and the management of hazardous wastes during the next five years.

(7) A schedule of recommended actions, including specific dates, for carrying out state, regional, and local actions to implement the state hazardous waste management plan.

(Amended by Stats. 1990, Ch. 1093.)

Article 4. Listings

(Article 4 added by Stats. 1972, Ch. 1236)

25140. The department shall prepare, adopt and may revise when appropriate, a listing of the wastes which are determined to be hazardous, and a listing of the wastes which are determined to be extremely hazardous. In identifying such wastes the department shall consider, but not be limited to, the immediate or persistent toxic effects to man and wildlife and the resistance to natural degradation or detoxification of the wastes.

(Added by Stats. 1972, Ch. 1236.)

25141. The department shall develop and adopt by regulation criteria and guidelines for the identification of hazardous wastes and extremely hazardous wastes.

(Added by Stats. 1977, Ch. 1039.)

25141.1. (a) The California Environmental Protection Agency shall enter into a contract for a study to determine if the criteria specified in Section 66261.22 of Title 22 of the California Code of Regulations, including existing testing protocols, should apply to cementitious wastes, including, but not limited to, portland cement and cement kiln dust. Until the study is completed, or until January 1, 1994, whichever occurs first, the department shall suspend the application of Section 66261.22 of Title 22 of the Code of Regulations with regard to determining corrosivity for these cementitious wastes.

(b) The Secretary for Environmental Protection shall appoint a technical advisory committee to assist in the selection of the contractor who is to conduct the study required by this section and to provide technical assistance during the study. The committee shall include a representative of all of the following, and the member appointed shall be technically qualified in the field of environmental science, chemistry, or biochemistry.

(1) The Secretary for Environmental Protection.

(2) The department.

(3) The State Water Resources Control Board.

(4) The California Integrated Waste Management Board.

(5) The state's cement industry.

(6) An environmental organization.

(c) It is the intent of the Legislature that the study required by this section shall be funded solely from funds provided from private industry, but the cost of the study shall not exceed one hundred thousand dollars ($100,000).

(d) The California Environmental Protection Agency shall only implement this section if private funds are made available in an amount sufficient to cover the total costs, including administrative expenses, of implementation.

(e) No state funds shall be used to implement this section.

(f) This section shall remain in effect only until January 1, 1994, and as of that date is repealed, unless a later enacted statute, which is enacted before January 1, 1994, deletes or extends that date.

(Added by Stats. 1992, Ch. 1125)

25141.5. The department shall, when classifying a waste as hazardous pursuant to the criteria in paragraph (8) of subdivision (a) of Section 66261.24 of Title 22 of the California Code of Regulations, as that section read on January 1, 1993, incorporate the department's decision into a regulation, if the department determines that the waste's classification as a hazardous waste is likely to have broad application beyond the producer who initiated the request.

(Added by Stats. 1992, Ch. 1058)

25142. Any waste which conforms to a criterion adopted pursuant to Section 25141 shall be managed in accordance with permits, orders, and regulations issued or adopted by the department pursuant to this chapter and building standards published in the State Building Standards Code relating to hazardous waste facilities, or recycled consistent with the list of hazardous wastes which the department, pursuant to Section 25175, finds are economically and technologically feasible to recycle until the waste is cited in a list adopted by the department pursuant to Section 25140.

(Amended by Stats. 1988, Ch. 1631.)

25143. (a) The department may grant a variance from one or more of the requirements of this chapter, or the regulations adopted pursuant to this chapter, for the

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(7) it contains any of the following substances at a single or combined concentration equal to or exceeding 0.001 percent by weight:

(A) 2–Acetylaminofluorene (2–AAF);
(B) Acrylonitrile;
(C) 4–Aminodiphenyl;
(D) Benzidine and its salts;
(E) bis (Chloromethyl) ether (BCME);
(F) Methyl chloromethyl ether;
(G) 1,2–Dibromo–3–chloropropane (DBCP);
(H) 3,3′–Dichlorobenzidine and its salts (DCB);
(I) 4–Dimethylaminoazobenzene (DAB);
(J) Ethyleneimine (EL);
(K) alpha–Naphthylamine (1–NA);
(L) beta–Naphthylamine (2–NA);
(M) 4–Nitrobiphenyl (4–NBP);
(N) N–Nitrosodimethylamine (DMN);
(O) beta–Propiolactone (BPL);
(P) Vinyl chloride (VCM);

(8) it has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment.

(b) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have the property specified in subsection (a)(5) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and its head space vapor contains no such toxic materials in concentrations exceeding their respective acute inhalation LC_{50} or their LC_{LO}. The head space vapor of a waste shall be prepared, and two milliliters of it shall be sampled using a five milliliter gas–tight syringe, according to Method 5020 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 2nd edition, U.S. Environmental Protection Agency, 1982 (incorporated by reference, see section 66260.11). The quantity in milligrams of each material, which exhibits the characteristic of toxicity because it has the property specified in subsection (a)(5) of this section, in the sampling syringe shall be determined by comparison to liquid standard solutions according to the appropriate gas chromatographic procedures in Method 8010, 8015, 8020, 8030 or 8240 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11). The concentration of each material in the head space vapor shall be calculated using the following equation:

$$C_A = \frac{Q_A}{MW} \times \frac{29.8ml}{mmole} \times \frac{1}{2 \times 10^{-6} M^3}$$

where C (in parts per million) is the concentration of material A in head space vapor, Q (in milligrams) is the quantity of material A in sampling syringe and MW (in milligrams per millimole) is the molecular weight of material A. Where an acute inhalation LC_{50} is not available, an LC_{50} measured for another time (t) may be converted to an eight–hour value with the following equation:

Eight–hour LC_{50} = (t/8) x (t–hour LC_{50}).

(c) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have either of the properties specified in subsection (a)(3) or (a)(4) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and the calculated oral LD_{50} of the waste mixture is greater than 5,000 milligrams per kilogram and the calculated dermal LD_{50} is greater than 4,300 milligrams per kilogram by the following equation:

$$\text{Calculated oral or dermal } LD_{50} = \frac{100}{\sum_{x=1}^{n} \frac{\%}{{}^{T}A_x}}$$

where $\%A_x$ is the weight percent of each component in the waste mixture and ${}^{T}A_X$ is the acute oral or dermal LD_{50} or the acute oral LD_{LO} of each component.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. *Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.24.*

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

Article 4. Lists of RCRA Hazardous Wastes

§ 66261.30. General.

(a) A waste is a RCRA hazardous waste if it is listed in this article, unless it has been excluded from this list pursuant to 40 CFR sections 260.20 and 260.22 or is categorized as a non–RCRA hazardous waste pursuant to section 66261.101. Wastes shall only be listed in this article if they are listed in 40 CFR Part 261 Subpart D.

(b) The Department will indicate the USEPA Administrator's basis for listing the classes or types of wastes listed in this article by employing one or more of the following Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

Appendix VII of this chapter identifies the constituent which caused the USEPA Administrator to list the waste as a Toxic Waste (T) as included in sections 66261.31 and 66261.32.

(c) Each RCRA hazardous waste listed in this article is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number shall be used in complying with the notification requirements of Health and Safety Code section 25153.6 and certain recordkeeping and reporting requirements under chapters 12 through 15, 18, and 20 of this division.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. *Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.30.*

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

EPA Hazardous Waste Number	Contaminant	Chemical Abstracts Service Number	Regulatory Level Mg/l
D004	Arsenic	7440–38–2	5.0
D005	Barium	7440–39–3	100.0
D018	Benzene	71–43–2	0.5
D006	Cadmium	7440–43–9	1.0
D019	Carbon tetrachloride	56–23–5	0.5
D020	Chlordane	57–74–9	0.03
D021	Chlorobenzene	108–90–7	100.0
D022	Chloroform	67–66–3	6.0
D007	Chromium	7440–47–3	5.0
D023	o–Cresol	95–48–7	200.0[1]
D024	m–Cresol	108–39–4	200.0[1]
D025	p–Cresol	106–44–5	200.0[1]
D026	Cresol		200.0[1]
D016	2,4–D	94–75–7	10.0
D027	1,4–Dichlorobenzene	106–46–7	7.5
D028	1,2–Dichloroethane	107–06–2	0.5
D029	1,1–Dichloroethylene	75–35–4	0.7
D030	2,4–Dinitrotoluene	121–14–2	0.13
D012	Endrin	72–20–8	0.02
D031	Heptachlor (and its epoxide)	76–44–8	0.008
D032	Hexachlorobenzene	118–74–1	0.13
D033	Hexachlorobutadiene	87–68–3	0.5
D034	Hexachloroethane	67–72–1	3.0
D008	Lead	7439–92–1	5.0
D013	Lindane	58–89–9	0.4
D009	Mercury	7439–97–6	0.2
D014	Methoxychlor	72–43–5	10.0
D035	Methyl ethyl ketone	78–93–3	200.0
D036	Nitrobenzene	98–95–3	2.0
D037	Pentachlorophenol	87–86–5	100.0
D038	Pyridine	110–86–1	5.0[2]
D010	Selenium	7782–49–2	1.0
D011	Silver	7440–22–4	5.0
D039	Tetrachloroethylene	127–18–4	0.7
D015	Toxaphene	8001–35–2	0.5
D040	Trichloroethylene	79–01–6	0.5
D041	2,4,5–Trichlorophenol	95–95–4	400.0
D042	2,4,6–Trichlorophenol	88–06–2	2.0
D017	2,4,5–TP (Silvex)	93–72–1	1.0
D043	Vinyl chloride	75–01–4	0.2

[1] If o–, m– and p–Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

[2] Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

(2) it contains a substance listed in subsections (a)(2)(A) or (a)(2)(B) of this section at a concentration in milligrams per liter of waste extract, as determined using the Waste Extraction Test (WET) described in Appendix II of this chapter, which equals or exceeds its listed soluble threshold limit concentration or at a concentration in milligrams per kilogram in the waste which equals or exceeds its listed total threshold limit concentration;

(A) Table II – List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration:

(STLC) and Total Threshold Limit Concentration (TTLC) Values.

Substance*+	STLC mg/l	TTLC Wet–Weight mg/kg
Antimony and/or antimony compounds	15	500
Arsenic and/or arsenic compounds	5.0	500
Asbestos		1.0 (as percent)
Barium and/or barium compounds (excluding barite)	100	10,000++
Beryllium and/or beryllium compounds	0.75	75
Cadmium and/or cadmium compounds	1.0	100
Chromium (VI) compounds	5	500
Chromium and/or chromium (III) compounds	5**	2,500
Cobalt and/or cobalt compounds	80	8,000
Copper and/or copper compounds	25	2,500
Fluoride salts	180	18,000
Lead and/or lead compounds	5.0	1,000
Mercury and/or mercury compounds	0.2	20
Molybdenum and/or molybdenum compounds	350	3,500
Nickel and/or nickel compounds	20	2,000
Selenium and/or selenium compounds	1.0	100
Silver and/or silver compounds	5	500
Thallium and/or thallium compounds	7.0	700
Vanadium and/or vanadium compounds	24	2,400
Zinc and/or zinc compounds	250	5,000

*STLC and TTLC values are calculated on the concentrations of the elements, not the compounds.

**If the soluble chromium, as determined by the TCLP set forth in Appendix I of chapter 18 of this division, is less than 5 mg/l, and the soluble chromium, as determined by the procedures set forth in Appendix II of chapter 11, equals or exceeds 560 mg/l and the waste is not otherwise identified as a RCRA hazardous waste pursuant to section 66261.100, then the waste is a non–RCRA hazardous waste.

+In the case of asbestos and elemental metals, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

++Excluding barium sulfate.

(B) Table III – List of Organic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values:

Substance	STLC mg/l	TTLC Wet Weight mg/kg
Aldrin	0.14	1.4
Chlordane	0.25	2.5
DDT, DDE, DDD	0.1	1.0
2,4–Dichlorophenoxyacetic acid	10	100
Dieldrin	0.8	8.0
Dioxin (2,3,7,8–TCDD)	0.001	0.01
Endrin	0.02	0.2
Heptachlor	0.47	4.7
Kepone	2.1	21
Lead compounds, organic	—	13
Lindane	0.4	4.0
Methoxychlor	10	100
Mirex	2.1	21
Pentachlorophenol	1.7	17
Polychlorinated biphenyls (PCBs)	5.0	50
Toxaphene	0.5	5
Trichloroethylene	204	2,040
2,4,5–Trichlorophenoxypropionic acid	1.0	10

(3) it has an acute oral LD_{50} less than 5,000 milligrams per kilogram;

(4) it has an acute dermal LD_{50} less than 4,300 milligrams per kilogram;

(5) it has an acute inhalation LC_{50} less than 10,000 parts per million as a gas or vapor;

(6) it has an acute aquatic 96–hour LC_{50} less than 500 milligrams per liter when measured in soft water (total hardness 40 to 48 milligrams per liter of calcium carbonate) with fathead minnows (*Pimephales promelas*), rainbow trout (*Salmo gairdneri*) or golden shiners (*Notemigonus crysoleucas*) according to procedures described in Part 800 of the "Standard Methods for the Examination of Water and Wastewater (16th Edition)," American Public Health Association, 1985 and "Static Acute Bioassay Procedures for Hazardous Waste Samples," California Department of Fish and Game, Water Pollution Control Laboratory, revised November 1988 (incorporated by reference, see section 66260.11), or by other test methods or test fish approved by the Department, using test samples prepared or meeting the conditions for testing as prescribed in subdivisions (c) and (d) of Appendix II of this chapter, and solubilized, suspended, dispersed or emulsified by the cited procedures or by other methods approved by the Department;

In addition to the sampling methods in chapter nine of SW–846, the Department will consider samples obtained using any of the other applicable sampling methods specified in Appendix I of this chapter to be representative samples.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.20.

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

§ 66261.21. Characteristic of Ignitability.

(a) A waste exhibits the characteristic of ignitability if representative samples of the waste have any of the following properties:

(1) it is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60°C (140°F), as determined by a Pensky–Martens Closed Cup Tester, using the test method specified in ASTM Standard D–93–79 or D–93–80 (incorporated by reference, see section 66260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D–3278–78 (incorporated by reference, see section 66260.11), or as determined by an equivalent test method approved by the Department pursuant to section 66260.21;

(2) it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;

(3) it is an ignitable compressed gas as defined in 49 CFR section 173.300 (as amended September 30, 1982) and as determined by the test methods described in that regulation or equivalent test methods approved by the Department pursuant to section 66260.21;

(4) it is an oxidizer as defined in 49 CFR section 173.151 (as amended May 31, 1979).

(b) A waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.21.

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

§ 66261.22. Characteristic of Corrosivity.

(a) A waste exhibits the characteristic of corrosivity if representative samples of the waste have any of the following properties:

(1) it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either the EPA test method for pH or an equivalent test method approved by the Department pursuant to section 66260.21. The EPA test method for pH is specified as Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11);

(2) it is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE Standard TM–01–69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or an equivalent test method approved by the Department pursuant to section 66260.21;

(3) it is not aqueous and, when mixed with an equivalent weight of water, produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or an equivalent test method approved by the Department pursuant to 66260.21;

(4) it is not a liquid and, when mixed with an equivalent weight of water, produces a liquid that corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE Standard TM–01–69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW–846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11) or an equivalent test method approved by the Department pursuant to 66260.21.

(b) A waste that exhibits the characteristic of corrosivity specified in subsection (a)(1) or (a)(2) of this section has the EPA Hazardous Waste Number of D002.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.22.

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

§ 66261.23. Characteristic of Reactivity.

(a) A waste exhibits the characteristic of reactivity if representative samples of the waste have any of the following properties:

(1) it is normally unstable and readily undergoes violent change without detonating;

(2) it reacts violently with water;

(3) it forms potentially explosive mixtures with water;

(4) when mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(5) it is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;

(6) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(7) it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

(8) it is a forbidden explosive as defined in 49 CFR section 173.51 (as amended April 20, 1987), or a Class A explosive as defined in 49 CFR section 173.53 (as amended April 5, 1967) or a Class B explosive as defined in 49 CFR section 173.88 (as amended May 19, 1980).

(b) A waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

NOTE: Authority cited: Sections 208, 25141 and 25159, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.23.

HISTORY

1. New section filed 5–24–91; effective 7–1–91 (Register 91, No. 22).

§ 66261.24. Characteristic of Toxicity.

(a) A waste exhibits the characteristic of toxicity if representative samples of the waste have any of the following properties:

(1) when using the Toxicity Characteristic Leaching Procedure (TCLP) in Appendix I of chapter 18 of this division or equivalent methods approved by the Department under the procedures set forth in section 66260.21, the extracts from representative samples of the waste contain any of the contaminants listed in Table I of this section at a concentration equal to or greater than the respective value given in that table unless the waste is excluded from classification as a solid waste or hazardous waste or is exempted from regulation pursuant to 40 CFR section 261.4. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section;

(A) a waste that exhibits the characteristic of toxicity pursuant to subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous;

(B) Table I – Maximum Concentration of Contaminants for the Toxicity Characteristic:

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not low hazard (based on currently available data) at ore and mineral processing facilities. Therefore, the impacts of today's rule fall within any metal or non-metal commodity sectors generating such waste streams from mineral processing operations, but only to the extent that these wastes exhibit the characteristic tests for hazardous wastes under subtitle C of RCRA.

EPA's impact assessment indicates that today's rule is not a major rule (at least according to criterion 1, above), in that preliminary screening level estimates place the total annual costs of compliance at about $53 million per year. Because this is a screening level analysis, however, the level and distribution of impacts is uncertain. It does appear that a few individual mineral commodity sectors or processing technologies could incur annual costs in the range of one to seven percent of their annual value of shipments (sales). These sectors or technologies, though few in number and small in total value of shipments relative to the 101 commodity sectors reviewed in the study, could be said to incur moderate to substantial impacts. Overall, however, with respect to the mineral industry as a whole or the portion of the industry that performs "mineral processing" in particular, the Agency believes, on the basis of its screening analysis, that today's rule does not constitute a major rule within the context of E.O. 12291.

A. General Approach to Compliance Cost Estimation

The purpose of this analysis was to assess the general level of costs and resultant economic impacts arising from the imposition of current subtitle C requirements on smaller volume mineral processing wastes and high volume wastes that are not low hazard that were previously exempt under the Bevill Amendment. As noted above, a complete and detailed examination of the costs and potential impacts of today's rule was not possible given the Court-ordered schedule prompting this rulemaking. The Agency has, however, undertaken a comprehensive screening-level review of all sectors that could be affected directly by today's rule.

EPA's economic screening methodology consisted of a number of straightforward steps designed to (1) identify and describe all mineral processing sectors, (2) characterize and determine the approximate quantities of relevant waste streams, and (3) estimate the subtitle C compliance costs for all sectors generating potentially hazardous wastes. This section briefly describes the approaches and information sources used to develop these preliminary cost estimates. The following two sections describe the cost estimates and discuss impacts on affected sectors. Additional information concerning the techniques, assumptions, and data sources used in this analysis may be found in a technical background document in the docket for today's rule.[8]

1. Processing Sector Identification

The starting point for the analysis was to identify mineral industry commodity sectors that conduct mineral processing operations within the definition of today's rule. Obviously, facilities in sectors that do not employ such operations will not experience any economic impacts. Working with the U.S. Bureau of Mines, the Agency identified a total of 101 differentiable mineral commodity sectors for initial review. Those specific sectors that employ mineral processing operations were identified by intensive contact with commodity and technical specialists at the U.S. Bureau of Mines, and by consulting outside mineral industry experts particularly knowledgeable of specific industry production techniques and waste management practices. Of the 101 initial sectors, 43 were identified as domestic mineral commodity processing sectors subject to further analysis and review of waste stream characteristics. Of the 58 remaining sectors, 51 commodity sectors were screened out as not conducting processing (i.e., their finished product resulted directly from beneficiation activities). The commodities produced domestically using extraction and beneficiation operations exclusively are listed in appendix A. An additional 7 mineral commodities are not currently processed in the United States. These include arsenic trioxide, cobalt, gallium, graphite, indium, nickel, and thallium.

It is highly noteworthy that the vast majority of mineral commodities listed in appendix A are non-metallic and that only nine of the 43 domestic sectors conducting mineral processing operations produce non-metallic commodities. Thus, the first conclusion that EPA may draw from this screening analysis is that the results from previous cost and impact studies focusing on metallic ore processing sectors are not likely to dramatically underestimate total regulatory compliance costs associated with this rule, as some commenters have persistently claimed.

[8] USEPA, "Technical Background Document: Development of the Cost, Economic, and Small Business Impacts Arising from the Reinterpretation of the Bevill Exclusion for Mineral Processing Wastes", August 18, 1989.

2. Waste Characterization

The next step was to identify, quantify, and characterize the specific waste streams generated by the 43 identified processing sectors in order to ascertain the extent to which these facilities might be brought into the subtitle C hazardous waste management system. For a few of these sectors, the Agency had past field surveys or sampling data to draw upon, supplemented to some degree by data submitted by commenters in response to previous NPRM's. For the majority of commodity sectors, however, we relied upon technical expertise provided by process engineers experienced in designing and constructing mineral processing facilities and associated waste management systems.

TABLE 3.—MINERAL PROCESSING SECTORS NOT GENERATING POTENTIALLY HAZARDOUS MINERAL PROCESSING WASTES

Antimony [1]
Barite
Bauxite
Beryllium
Boron
Cadmium
Cerium
Cesium/Rubidium
Chromium
Coal Gas
Gemstones
Gold/Silver
Hydrofluoric Acid
Iron
Lightweight Aggregate
Lithium (from ore)
Magnesium (from ore)
Manganese, Ferromanganese
Phosphoric Acid (wet process)
Silicon, Ferrosilicon
Steel
Strontium
Synthetic Rutile
Titanium Dioxide
Zirconium/Hafnium

[1] From pyrometallurgical operations

For each sector, a brief but systematic review was conducted for the principal or typical processing operation(s), including, for each waste, a waste description, waste generation-to-product ratio estimates, and an assessment of the likelihood of the particular waste exhibiting one or more hazardous waste characteristics. Based upon available information and best professional judgment, 25 of the 43 mineral processing commodity sectors evaluated were found not to generate any solid wastes that are likely to fail characteristic tests for hazard. Because these sectors, which are listed in Table 3, will not suffer economic impacts because of today's final rule, they were not considered further. A total of 18

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toxicity, and do not fail the test for any other characteristic) are:

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/crome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludes generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome-tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore), except as provided by § 266.112 of this chapter for facilities that burn or process hazardous waste. For purposes of § 261.4(b)(7), beneficiation of ores and minerals is restricted to the following activities: Crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and *in situ* leaching. For the purpose of § 261.4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes:

(i) Slag from primary copper processing;

(ii) Slag from primary lead processing;

(iii) Red and brown muds from bauxite refining;

(iv) Phosphogypsum from phosphoric acid production;

(v) Slag from elemental phosphorus production;

(vi) Gasifier ash from coal gasification;

(vii) Process wastewater from coal gasification;

(viii) Calcium sulfate wastewater treatment plant sludge from primary copper processing;

(ix) Slag tailings from primary copper processing;

(x) Fluorogypsum from hydrofluoric acid production;

(xi) Process wastewater from hydrofluoric acid production;

(xii) Air pollution control dust/sludge from iron blast furnaces;

(xiii) Iron blast furnace slag;

(xiv) Treated residue from roasting/leaching of chrome ore;

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management of a hazardous waste if all of the following conditions apply:

(1) The hazardous waste is solely a non-RCRA hazardous waste or the hazardous waste or its management is exempt from, or is not otherwise regulated pursuant to, the Resource Conservation and Recovery Act of 1976, as amended, (42 U.S.C. Sec. 6901 et seq.).

(2) The department makes one of the following findings:

(A) The hazardous waste, the amount of the hazardous waste, or the hazardous waste management activity or management unit is insignificant or unimportant as a potential hazard to human health and safety, and the environment.

(B) The handling, processing, or disposal of the hazardous waste, or the hazardous waste management activity, is regulated by another governmental agency in a manner that ensures it will not pose a substantial present or potential hazard to human health and safety, and the environment.

(3) The variance is granted in accordance with this section.

(b) The department may grant a variance only upon receipt of a variance application containing sufficient information to enable the department to determine if all of the conditions required by subdivision (a) are satisfied.

(c) Each variance issued pursuant to this section shall be issued on a form prescribed by the department and shall include, but not be limited to, all of the following:

(1) The name of the producer of the hazardous waste or the owner and operator of the hazardous waste management facility or unit to whom the variance is granted.

(2) A description of the physical characteristics and chemical composition of the hazardous waste or the specifications of the hazardous waste management activity or unit to which the variance applies.

(3) The time period during which the variance is effective.

(4) A specification of the requirements of this chapter or the regulations adopted pursuant to this chapter from which the variance is granted.

(5) A specification of the conditions, limitations, or other requirements to which the variance is subject.

(d) Variances issued pursuant to subdivision (a) are subject to review at the discretion of the department and may be revoked at any time. The department shall revoke a variance if the department finds any of the following:

(1) The conditions required by subdivision (a) are no longer satisfied.

(2) The holder of the variance is in violation of one or more of the conditions, limitations, or other requirements of the variance, and, as a result of the violation, the conditions required by subdivision (a) are no longer satisfied.

(3) If the variance was granted because of the finding specified in subparagraph (B) of paragraph (2) of subdivision (a), the holder of the variance is in violation of one or more of the regulatory requirements of another governmental agency to which the holder is subject and the violation invalidates that finding.

(Amended by Stats. 1992, Ch. 1345)

25143.1. (a) Any geothermal waste resulting from drilling for geothermal resources is exempt from the requirements of this chapter because the disposal of the geothermal wastes is regulated by the California regional water quality control boards.

(b) (1) Wastes from the extraction, beneficiation, and processing of ores and minerals that are not subject to regulation under Subchapter III (commencing with Section 6921) of Chapter 82 of Title 42 of the United States Code are exempt from the requirements of this chapter, except the requirements of Article 9.5 (commencing with Section 25208), as provided in paragraph (2).

(2) The wastes subject to this subdivision are subject to Article 9.5 (commencing with Section 25208) and Chapter 6.8 (commencing with Section 25300) if the wastes would otherwise be classified as hazardous waste pursuant to Section 25117 and the regulations adopted pursuant to Section 25141.

(3) For purposes of this subdivision, the following definitions shall apply:

(A) "Wastes from the extraction, beneficiation, and processing of ores and minerals" means any of the following:

(i) Soil, waste rock, overburden, and any other solid, semisolid, or liquid natural materials that are removed, unearthed, or otherwise displaced as a result of excavating or recovering an ore or a mineral.

(ii) Residuals of ores or minerals after those ores or minerals have been removed, unearthed, or otherwise displaced from their natural sites and physically or chemically treated or otherwise managed in order to separate or concentrate the commercial product present in the ore or mineral, or processed to produce a final marketable product.

(B) "Minerals" has the same meaning as defined in Section 2005 of the Public Resources Code.

(Amended by Stats. 1991, Ch. 174)

See 14 CCR 25143.2

Exclusions

25143.2. (a) Recyclable materials are subject to the requirements of this chapter and the regulations adopted by the department to implement this chapter which apply to hazardous wastes, unless the department issues a variance pursuant to Section 25143, or except as provided otherwise in subdivision (b), (c), or (d) or the regulations adopted by the department pursuant to Sections 25150 and 25151. For the purposes of this section, recyclable material does not include infectious waste.

(b) Except as otherwise provided in subdivisions (e), (f), and (g), recyclable material which is managed in accordance with Section 25143.9 and is or will be recycled by any of the following methods shall be excluded from classification as a waste:

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wholesome and potable water. These standards specify maximum contaminant levels:

(1) At the point of delivery to the consumer which may adversely affect the taste, odor or appearance of drinking water.

(2) Which, if exceeded, may cause a substantial number of persons served by the community water system to discontinue its use.

(b) The local health officer shall ensure compliance with the requirements of this article by community water systems with less than 200 service connections and state small water systems.

§ 64473. Maximum Contaminant Levels.

(a) Distribution system water containing substances exceeding the maximum contaminant levels shown in Tables 6 and 7 may be objectionable to an appreciable number of people, but is not generally hazardous to health.

Table 6
Consumer Acceptance Limits—Secondary Drinking Water Standards

Constituents	*Maximum Contaminant Levels*
Color	15 Units
Copper	1.0 mg/l
Corrosivity	Relatively low
Iron	0.3 mg/l
Manganese	0.05 mg/l
Odor—Threshold	3 Units
Foaming Agents (MBAS)	0.5 mg/l
Thiobencarb	1.0 ug/l
Turbidity	5 Units
Zinc	5.0 mg/l

Table 7
Mineralization—Secondary Drinking Water Standards

	Maximum Contaminant Levels		
Constituent, Units	*Recommended*	*Upper*	*Short Term*
Total Dissolved Solids, mg/l	500	1,000	1,500
or			
Specific Conductance, micromhos	900	1,600	2,200
Chloride, mg/l	250	500	600
Sulfate, mg/l	250	500	600

(b) The maximum contaminant levels listed in Table 6:

(1) Shall not be exceeded in:

(A) New community water systems.

(B) New sources developed for existing community water systems.

(2) Shall not be exceeded in existing community water systems. The distribution system water shall be free from significant amounts of particulate matter in all public water systems.

(c) In existing community water systems, if any maximum contaminant level in Table 6 is exceeded, the water supplier, pursuant to Section 4023, Health and Safety Code, may be required, following an investigation by the Department, to conduct a study.

(1) The investigation by the Department shall determine the extent of:

(A) Noncompliance with the maximum contaminant levels.

(B) Consumer dissatisfaction which is based upon the secondary drinking water standards.

(2) The study conducted by the water supplier shall:

(A) Be conducted in a manner and in accordance with a schedule acceptable to the Department and be completed in a period of time not to exceed one year.

(B) Be made by persons acceptable to the Department.

(C) Determine the degree of consumer acceptance of the water supply.

(D) Investigate the causes, methods of correction and estimate the cost of one or more alternative solutions.

(3) The results of the study conducted by the water supplier shall be made available to the:

(A) Users at an appropriately noticed public meeting.

(B) Department.

(C) Public Utilities Commission, if appropriate.

(d) The requirements of (b) (1) (B) and (b) (2) may be waived by the Department following the completion of an investigation as required in (c) based upon, but not necessarily limited to:

(1) Consumer acceptance of water not meeting the maximum contaminant levels shown in Table 6.

(2) Economic considerations.

(e) For the constituents shown on Table 7, no fixed consumer acceptance contaminant level has been established.

(1) Constituent concentrations lower than the Recommended contaminant level are desirable for a higher degree of consumer acceptance.

(2) Constituent concentrations ranging to the Upper contaminant level are acceptable if it is neither reasonable nor feasible to provide more suitable waters.

(3) Constituent concentrations ranging to the Short Term contaminant level are acceptable only for existing systems on a temporary basis pending construction of treatment facilities or development of acceptable new water sources.

(f) New services from systems serving water which carries constituent concentrations between the Upper and Short Term contaminant levels shall be approved only:

(1) If adequate progress is being demonstrated toward providing water of improved mineral quality.

(2) For other compelling reasons approved by the Department.

NOTE: Authority cited: Sections 208 and 4026, Health and Safety Code. Reference: Sections 4017 and 4024, Health and Safety Code.

HISTORY

1. Amendment of subsection (a) (Table 6) filed as an editorial correction 1-18-78; effective thirtieth day thereafter (Register 78, No. 3).
2. Amendment of subsection (a) (Table 6) filed 3-6-89; operative 4-5-89 (Register 89, No. 11).

§ 64475. Distribution System Physical Water Quality.

(a) The water supplier shall determine the physical water quality in the distribution system. This determination may be based upon:

(1) Main flushing operations and flushing records.

(2) Consumer complaint records showing location, nature and duration of the physical water quality problem.

(3) Other pertinent data relative to physical water quality in the distribution system.

(b) The Department may also require the water supplier to take samples for general physical analyses as defined in Section 64433 (a)(2).

(c) Samples, for required general physical analyses, shall be collected from representative points in the distribution system. Samples shall be collected at the following minimum frequencies:

(1) For community water systems with 200 to 1,000 service connections: one sample per month.

(2) For community water systems with greater than 1,000 service connections: one sample for every four bacteriological samples required per month.

(3) For community water systems with less than 200 service connections: as established by the local health officer.

(d) Odor samples required as a part of general physical analyses may be examined in the field as per Section 64415(b).

NOTE: Authority cited: Sections 208 and 4026, Health and Safety Code. Reference: Section 4024, Health and Safety Code.

HISTORY

1. Amendment of subsection (b) filed as an editorial correction 1-18-78; effective thirtieth day thereafter (Register 78, No. 3).
2. New NOTE filed 12-7-84 (Register 84, No. 49).

Article 9. Water Testing Laboratories

§ 64481. Application.

(a) Any person, firm, partnership, association, corporation, or political subdivision of a governmental agency desiring certification as a Water Testing Laboratory shall make application on forms and following instructions supplied by the Department. The applicant shall set forth all pertinent information required by the application and shall furnish any additional information requested by the Department.

(b) The Department shall make a site visit to verify information contained in an application and to secure additional information necessary for evaluation of the application.

NOTE: Authority cited: Sections 208 and 4025, Health and Safety Code. Reference: Section 4025, Health and Safety Code.

ATTACHMENT 19

EAGLE MOUNTAIN MINE
MAILING LIST
Continued

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LABORATORY REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620 3376

Collector's Name: RICHARD HUBBELL

SCL NO. : 13479-13483, 13485, 13486, 13486A

Sample Location : EAGLE MOUNTAIN MINE
EAGLE MOUNTAIN MINE DESERT CENTER 92237

DATE REPORTED : 02/25/94

Analytical Procedures Used : EPA 8270

GC/MS SEMIVOLATILE ORGANICS ANALYSIS

	SCL NO.	Method Blank	13479	13480	13481	13482	13383	13485	13486	13486A	QUANTITATION LIMIT		
	COL.NO.		SH-1A	EC-1A	SH-2A	SC-1A	SC-2A	EPS-1A	OBP-1A	OBP-2A	Method Blank	13479 13480 13481 13483 13485 13486 13486A	13482
	MATRIX	SAND	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
COMPOUNDS	UNIT	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
CAS No.													
1,3-DICHLOROBENZENE	541-73-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BIS(2-CHLOROETHYL) ETHER	111-44-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
1,4-DICHLOROBENZENE	106-46-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
1,2-DICHLOROBENZENE	95-50-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
HEXACHLOROETHANE	67-72-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BIS(2-CHLOROISOPROPYL)ETHER	39638-32-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
N-NITROSO-DI-N-PROPYLAMINE	621-64-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
NITROBENZENE	98-95-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
ISOPHORONE	78-59-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
1,2,4-TRICHLOROBENZNE	120-82-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BIS(2-CHLOROETHOXY) METHANE	111-91-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
HEXACHLOROBUTADIENE	87-68-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
HEXACHLOROCYCLOPENTADIENE	77-47-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
2-CHLORONAPHTHALENE	91-58-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
DIMETHYLPHTHALATE	131-11-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
2,6-DINITROTOLUENE	606-20-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
4-CHLOROPHENYL PHENYL ETHER	7005-72-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
2,4-DINITROTOLUENE	121-14-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
DIETHYL PHTHALATE	84-66-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10

NOTE : QUANTITATION LIMIT = (CONCENTRATION OF THE LOWEST CALIBRATION STANDARD) TIMES (DILUTION FACTOR)
ND = NOT DETECTED

SAMPLE PREPARATION

NOEMI COSON

ANALYST

MARY NEE

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SCL NO. 13485,13486,13486A

GC/MS SEMIVOLATILE ORGANICS ANALYSIS

	SCL NO.	Method Blank	13479	13480	13481	13482	13483	13485	13486	13486A	QUANTITATION LIMIT: Method Blank	13479 13480 13481 13483 13485 13486 13486A	13482
	COL.NO.		SH-1A	EC-1A	SH-2A	SC-1A	SC-2A	EPS-1A	OBP-1A	OBP-2A			
	MATRIX	SAND	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
COMPOUNDS	UNIT	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
CAS No. N-NITROSODIPHENYLAMINE	80-30-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
4-BROMOPHENYL PHENYL ETHER	101-55-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
HEXACHLOROBENZENE	118-74-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
DI-N-BUTYL PHTHALATE	84-74-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	20	40
BUTYL BENZYL PHTHALATE	85-68-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BIS(2-ETHYL HEXYL) PHTHALATE	117-81-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
3,3-DICHLOROBENZIDINE	91-94-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	20	40
DI-N-OCTYL PHTHALATE	117-84-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
APHTHALENE	91-20-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
ACENAPHTHYLENE	208-96-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
ACENAPHTHENE	83-32-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
FLUORENE	86-73-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
PHENANTHRENE	85-01-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
ANTHRACENE	120-12-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
FLUORANTHENE	206-44-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
PYRENE	129-00-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BENZO(a)ANTHRACENE	56-55-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
CHRYSENE	218-01-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BENZO(b)FLUORANTHENE	205-99-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BENZO(k)FLUORANTHENE	207-08-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BENZO(a)PYRENE	50-32-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
INDENO(1,2,3-cd)PYRENE	193-39-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
DIBENZ(a,h)ANTHRACENE	50-70-3	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10
BENZO(ghi)PERYLENE	191-24-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	5	10

Note: ND = NOT DETECTED

SAMPLE PREPARTION

NOEMI COSON

ANALYST

MARY NEE

LABORATORY REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES, CA 90026
TELEPHONE (213) 620-3376

13479-13483
SCL NO. 13485,13486,13486A

GC/MS SEMIVOLATILE ORGANICS ANALYSIS

	SCL NO.	Method Blank	13479	13480	13481	13482	13483	13485	13486	13486A	QUANTITATION LIMIT		
	COL.NO.		SH-1A	EC-1A	SH-2A	SC-1A	SC-2A	EPS-1A	OBP-1A	OBP-2A	Method Blank	13479 13480 13481 13483 13485 13486 13486A	13482
	MATRIX	SAND	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
COMPOUNDS	UNIT	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
2-CHLOROPHENOL	CAS No. 95-57-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
PHENOL	108-95-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2-NITROPHENOL	88-75-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2,4-DIMETHYL PHENOL	105-67-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2,4-DICHLOROPHENOL	120-83-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
4-CHLORO-3-METHYL PHENOL	59-50-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2,4,6-TRICHLOROPHENOL	88-06-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2,4 DINITROPHENOL	51-28-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100
2 METHYL-4,6-DINITROPHENOL	534-52-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100
4 NITROPHENOL	100-02-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100
PENTACHLOROPHENOL	87-86-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100
BENZYL ALCOHOL	100-51-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2-METHYLPHENOL	95-48-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
4-METHYLPHENOL	106-44-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
BENZOIC ACID	65-85-0	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100
4-CHLOROANILINE	106-47-8	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2 METHYL NAPHTHALENE	91-57-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2,4,5-TRICHLOROPHENOL	95-95-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
2-NITROANILINE	88-74-4	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	20	40
DIBENZOFURAN	132-64-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	10	20
3-NITROANILINE	99-09-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	20	40
4-NITROANILINE	100-01-6	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	50	100

TENTATIVELY IDENTIFIED COMPOUNDS : ALIPHATIC HYDROCARBONS(C19-C22 & UP);CYCLIC HYDROCARBONS WERE ALSO PRESENT IN SAMPLE 13482.

NOTE: ND = NOT DETECTED

SAMPLE PREPARATION
NOEMI COSON 3/7/94 Date

ANALYST
MARY NEE 3/7/94 Date

SUPERVISING CHEMIST
RUSS CHIN 3/ Date

QUALITY CONTROL (QC) REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET LOS ANGELES CA. 90026
TEL:(213) 620-3376

COLLECTOR'S NAME : RICHARD HUBBELL

DATE SAMPLE RECEIVED: 02/15/94

SAMPLING LOCATION: EAGLE MOUNTAIN MINE
EAGLE MOUNTAIN MINE DESERT CENTER 92237

DATE SAMPLE PREPARED: 02/17 23/94

ANALYTICAL BATCH LAB ID NO.: SCL 13479-13483,13485,13486,13486A

DATE SAMPLE ANALYZED: 02/24,25/94

ANALYTICAL PROCEDURES USED: EPA METHOD 8270 GC/MS FOR SEMIVOLATILE ORGANICS
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3640 GEL PERMEATION COLUMN CLEANUP

QC REPORT FOR

A: METHOD STANDARD
B: LABORATORY CONTROL SAMPLE
C: DUPLICATE SAMPLE ANALYSIS

	A		B	
	METHOD STANDARD RECOVERY FOR EPA 3540	CONTROL LIMITS FOR METHOD STANDARD % RECOVERY	LAB CONTROL SAMPLE ID NO: LCS-BNA-1-0492 LCS-BNA-2-0492	
			Found	Control Limit
COMPOUND	%	%	mg/kg	mg/kg
PHENOL	100	59.8-117	709	485-940
2 CHLOROPHENOL	95	50.7-137	566	373-831
1,4-DICHLOROBENZENE	66	25.8-107	322	312-534
N-NITROSO-DI-N-PROPYLAMINE	94	60.8-115	1042	584-1154
1,2,4-TRICHLOLROBENZENE	90	48.2-115	490	418-774
4 CHLORO-3-METHYL PHENOL	99	68.6-117	835	672-936
ACENAPHTHENE	103	77.8-111	564	424-835
4-NITROPHENOL	100	60.0-128	931	508-1151
2,4-DINITROTOLUENE	104	73.0-119	806	578-1063
PENTACHLOROPHENOL	97	64.7-125	829	589-1020
PYRENE	114	73.1-117	552	386-820

C			
DULPICATE SAMPLE ANALYSIS			
Performed on SCL 13480	Matrix	SOIL	
	Run 1	Run 2	RPD
COMPOUND	mg/kg	mg/kg	%
NO DATA(ANALYTE WAS NOT DETECTED OR BELOW QUANTITATION LIMIT)	-	-	-
CONTROL LIMIT			0 20

SAMPLE PREPARATION:

NOEMI COSON — DATE 3/7/94

ANALYST:

MARY NEE — DATE 3/7/94

SUPERVISING CHEMIST

RUSS CHIN — DATE

QUALITY CONTROL (QC) REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES CA. 90026
TEL:(213) 620-3376

COLLECTOR'S NAME : RICHARD HUBBELL

SAMPLING LOCATION: EAGLE MOUNTAIN MINE
EAGLE MOUNTAIN MINE DESERT CENTER 92237

ANALYTICAL BATCH LAB ID NO.: SCL 13479-13483,13485,13486,13486A

ANALYTICAL PROCEDURES USED: EPA METHOD 8270 GC/MS FOR SEMIVOLATILE ORGANICS
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3640 GEL PERMEATION COLUMN CLEANUP

DATE SAMPLE RECEIVED: 02/15/94

DATE SAMPLE PREPARED: 02/17-23/94

DATE SAMPLE ANALYZED: 02/24,25/94

QC REPORT FOR

MATRIX SPIKE(MS)/MATRIX SPIKE DUPLICATE(MSD) PERCENT RECOVERY

MATRIX SPIKE REFORMED ON SCL 13480 TYPE OF MATRIX SOIL

COMPOUND	AMOUNT OF ANALYTE IN SAMPLE	AMOUNT ANALYTE ADDED	MATRIX SPIKE		MATRIX SPIKE DUPLICATE		AVE	CONTROL LIMITS FOR % REC	R % D BETWEEN MS/MSD	[illegible]
			AMOUNT RECOVERED	% REC	AMOUNT RECOVERED	% REC	% REC			
	MG/KG	MG/KG	MG/KG	%	MG/KG	%	%	MG/KG	%	%
PHENOL	<10	1000	976	98	987	99	98	57.0-125	1.0	U 20
2-CHLOROPHENOL	<10	1000	972	97	972	97	97	54.9-118	0	U 20
1,4-DICHLOROBENZENE	<5	500	405	81	418	84	82	38.3-117	3.6	U 20
N NITROSO-DI-N-PROPYLAMINE	<5	500	453	91	460	92	92	48.7-137	1.1	U 20
1,2,4-TRICHLOROBENZENE	<5	500	462	92	465	93	92	63.3-107	1.1	U 20
4-CHLORO-3-METHYL PHENOL	<10	1000	944	94	970	97	96	60.8-132	3.1	U 20
ACENAPHTHENE	<5	500	492	98	498	100	99	74.4-114	2.0	U 20
4 NITROPHENOL	<50	1000	999	100	1026	103	102	35.5-148	2.9	U 20
2,4-DINITROTOLUENE	<5	500	485	97	495	99	98	54.3-129	2.0	U 20
PENTACHLOROPHENOL	<50	1000	978	98	988	99	98	48.5-134	1.0	U 20
PYRENE	<5	500	559	112	534	107	110	52.4-131	4.5	U 20

SAMPLE PREPARATION

NOEMI COSON 3/7/94
NOEMI COSON DATE

ANALYST

MARY NEE 3/7/94
MARY NEE DATE

SUPERVISING CHEMIST

RUSS CHIN
RUSS CHIN DATE

QUALITY CONTROL (QC) REPORT
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
HAZARDOUS MATERIALS LABORATORY - SOUTHERN CALIFORNIA
1449 WEST TEMPLE STREET, LOS ANGELES CA. 90026
TEL:(213) 620-3376

COLLECTOR'S NAME : RICHARD HUBBELL

SAMPLING LOCATION: EAGLE MOUNTAIN MINE
EAGLE MOUNTAIN MINE DESERT CENTER 92237

ANALYTICAL BATCH LAB ID NO.: SCL 13479-13483,13485,13486,13486A

ANALYTICAL PROCEDURES USED: EPA METHOD 8270 GC/MS FOR SEMIVOLATILE ORGANICS
EPA METHOD 3540 SOXHLET EXTRACTION
EPA METHOD 3640 GEL PERMEATION COLUMN CLEANUP

DATE SAMPLE RECEIVED:02/15/94

DATE SAMPLE PREPARED:02/17-23/94

DATE SAMPLE ANALYZED:02/24,25/94

QC REPORT FOR
SEMIVOLATILE SURROGATE RECOVERY

	2-FLUOROPHENOL			PHENOL-d6			NITROBENZENE-d5			2-FLUOROBIPHENYL			2,4,6-TRIBROMOPHENOL		
	ADDED	RECOVERED		ADDED	RECOVERED		ADDED	RECOVERED		ADDED	RECOVERED		ADDED	RECOVERED	
QC SAMPLES / SAMPLE NO.	MG/KG	MG/KG	% REC	MG/KG	MG/KG	% REC	MG/KG	MG/KG	% REC	MG/KG	MG/KG	% REC	MG/KG	MG/KG	% REC
METHOD BLANK	200	163	81	200	182	91	100	85	85	100	102	102	200	165	83
METHOD STANDARD	200	186	93	200	195	97	100	95	95	100	100	100	200	196	98
MATRIX SPIKE	1000	1000	100	1000	985	98	500	492	98	500	501	100	1000	969	97
MATRIX SOIKE DUPLICATE	1000	986	99	1000	992	99	500	489	98	500	507	101	1000	949	95
LAB CONTROL SAMPLE(LCS)	1000	897	90	1000	958	96	500	475	95	500	477	95	1000	926	93
SCL 13479	200	179	90	200	187	93	100	91	91	100	102	102	200	165	83
SCL 13480	200	181	90	200	188	94	100	92	92	100	100	100	200	155	77
SCL 13480 DUPLICATE	200	197	98	200	196	98	100	97	97	100	102	102	200	163	81
SCL 13481	200	179	89	200	186	93	100	94	94	100	101	101	200	149	74
SCL 13482	200	183	92	200	187	94	100	92	92	100	108	108	200	155	77
SCL 13483	200	184	92	200	190	95	100	95	95	100	100	100	200	166	83
SCL 13485	200	177	88	200	184	92	100	89	89	100	97	97	200	163	81
SCL 13486	200	188	94	200	195	98	100	94	94	100	100	100	200	165	82
SCL 13486A	200	170	85	200	182	91	100	90	90	100	101	101	200	166	83
CONTROL LIMIT FOR %REC	38.6-149			56.7-141			38.2-138			60.1-123			41.6 1..		

SAMPLE PREPARATION:

NOEMI COSON — DATE 3/7/94

ANALYST:

MARY NEE — DATE 3/7/94

SUPERVISING CHEMIST

RUSS CHIN — DATE

ATACHMENT 6

E.S. BABCOCK & SONS, INC.

6100 Quail Valley Court
Riverside, CA 92502

(909) 653-3351
FAX (909) 653-1662

CHAIN OF CUSTODY RECORD

Lab #s: _____ Invoice No. _____

Project No.	Project Name / Location	Determination Requested	Number of Containers	Condition of Sample: Sealed	Chilled	Preserved	Remarks
	Eagle Mountain Mine Eagle Mountain, CA						
Samplers: (signature)	Richard Hubbell						

Description	Sampled: Date	Time
Soil Gravel area SH-1-C	2/10/94	12:00
Eagle Mtn. Road Creek Gravel area grass EC-1-C	2/10/94	14.30
Soil Gravel area SH2-C	2/10/94	1300
Soil scrap staging area SC-1-C	2/10/94	1600
Soil Ephemeral Cooling area wash SI2C	2/10/94	1615
Soil Fine Tailing Pond FTP 1-C	2/11/94	0925
Soil Pit Storage, EPS-1-C	2/11/94	
Open burn pit OPB-1-C	2/11/94	
Open burn pit OPB 2-C	2/11/94	

Relinquished By:	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
Richard Hubbell	2/11/94 0850				
Relinquished By:	**Date/Time**	**Received By:**	**Received For Lab By:**	**Date / Time**	

Remarks:
- Sampler
- Mark Fuentes OTSC
- Sample Custody
- Rich Hubbell
- OTSC
- Evidence tape
- Intact

ATTACHMENT 7

STATE OF CALIFORNIA—ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
400 P Street, 4th Floor
P.O. Box 806
Sacramento, CA 95812-0806

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 4

To Chris Guerre	From BILL OWEN
Co. DTSC	Co.
Dept. FPB - GSU	Phone # CALNET 494 2406
Fax # 635 5511	Fax #

MEMORANDUM

TO: Christopher Guerre
Geological Services Unit, Region 4

FROM: William Owen
Geological Services Unit, Headquarters

DATE: February 22, 1994

SUBJECT: Results of Magnetometer Profiles, Eagle Mountain Mine

---

This memo summarizes the results of two magnetometer profiles recorded at the Eagle Mountain Mine, near Desert Center in Riverside County, California. These profiles were recorded on February 10 and 11, 1994, during a facility inspection conducted by the Region 4 Surveillance and Enforcement Branch, to screen areas suspected to contain buried ferromagnetic objects (i.e., drums or other waste containers).

Due to the widespread presence of magnetite ore tailings throughout the site, I could not assure reliable magnetic data from this site. Additionally, time constraints associated with the inspection would not allow detailed grid surveying. Therefore, rather than conduct grid surveys (which could yield considerably more data), I made one profile over each suspected area to screen for possible buried ferromagnetic objects. The results from these profiles, if negative, could not conclusively rule out the presence of buried objects. If positive, however, this information could be used to guide soil sampling locations during the inspection.

The profile data are shown in figures 1 and 2. Figure 1, from the Electric Scoop area, shows a sinusoidal anomaly that is often characteristic of a dipole source (most ferromagnetic objects behave as dipoles); however, the orientation of the high and low points on the profile is opposite of predicted for an induced dipole. This creates two contradictory interpretations: 1) the anomaly is not caused by buried iron or steel, or 2) if caused by iron or steel, the buried object(s) have a high degree of permanent magnetization. Given the presence of large amounts of magnetite at the site and the high permanent magnetization common to iron and steel, either interpretation is plausible.

Figure 2 shows the profile recorded from the Burn Pit Area. This profile shows a westerly increasing trend in total field intensity, with a spike of about 125 nanoteslas between 175 and

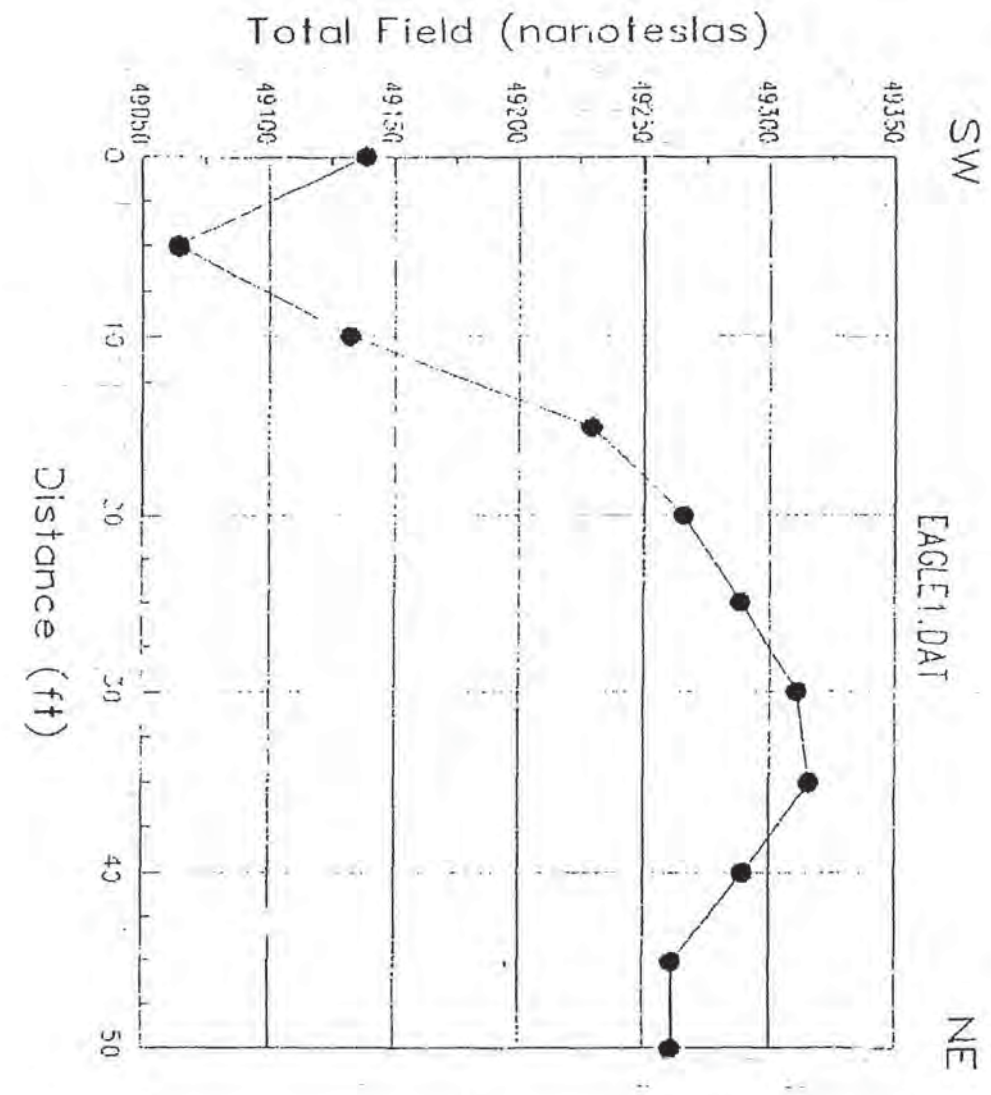
250 feet. This interval is near a suspected former waste disposal trench, and the observed spike could be related to the presence of buried iron or steel objects. However, the suspected trench is on a large pile of mine tailings; therefore, this single profile cannot be considered conclusive evidence of buried iron or steel.

Unfortunately, the presence of magnetic noise from the ore tailings and the limited magnetic profile data could not enable reliable interpretation. However, the data may be augmented by running grid surveys. This would allow better analysis of the shape and amplitude of the magnetic anomalies and hopefully lead to a more reliable interpretation. Pending analytical results of soil samples collected from the Electric Scoop and Burn Pit areas, if these areas are still of interest a more detailed grid survey using a magnetometer may provide helpful information.

I appreciated the opportunity to visit this site and provide you with assistance. If you have any questions or need additional assistance, please call me at (916) 255-2106 (CALNET 494-2106).

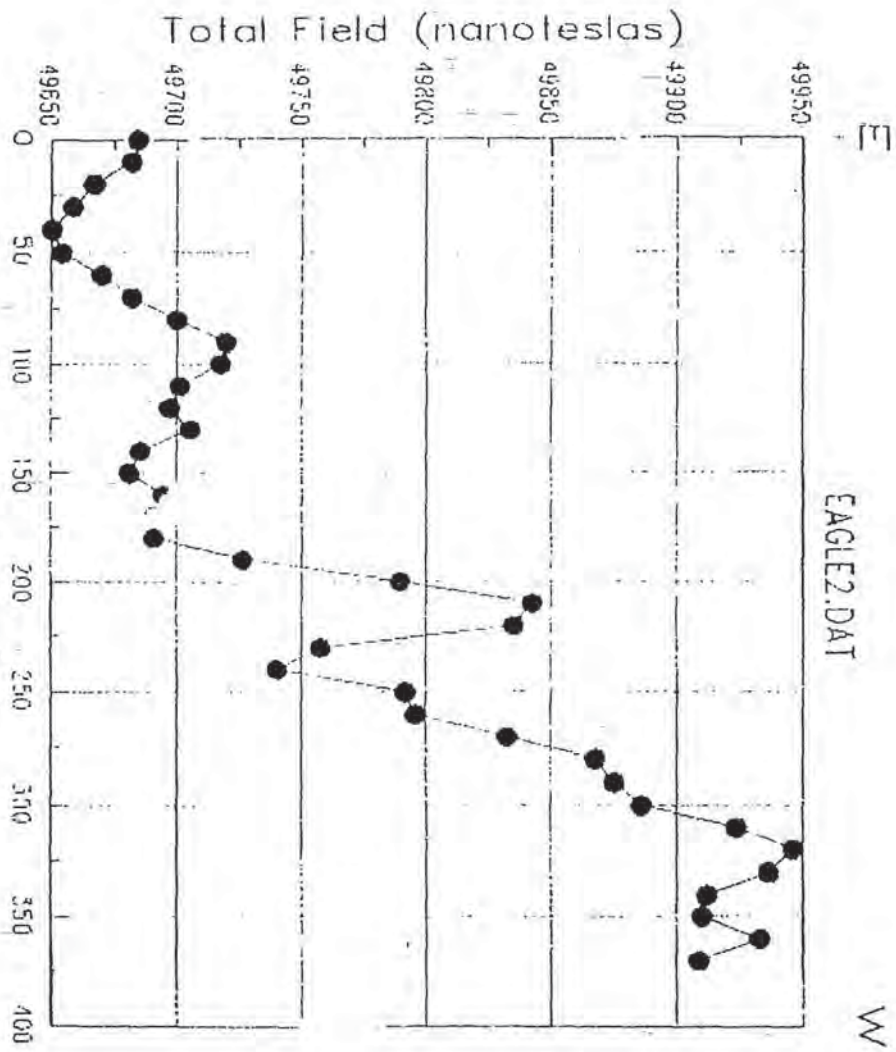
cc: Mark Fuentes
Region 4 SEB

Chris Guerre
February 22, 1994
Page 3



Profile of total field magnetic intensity, Electric Scoop Area

FIGURE 1

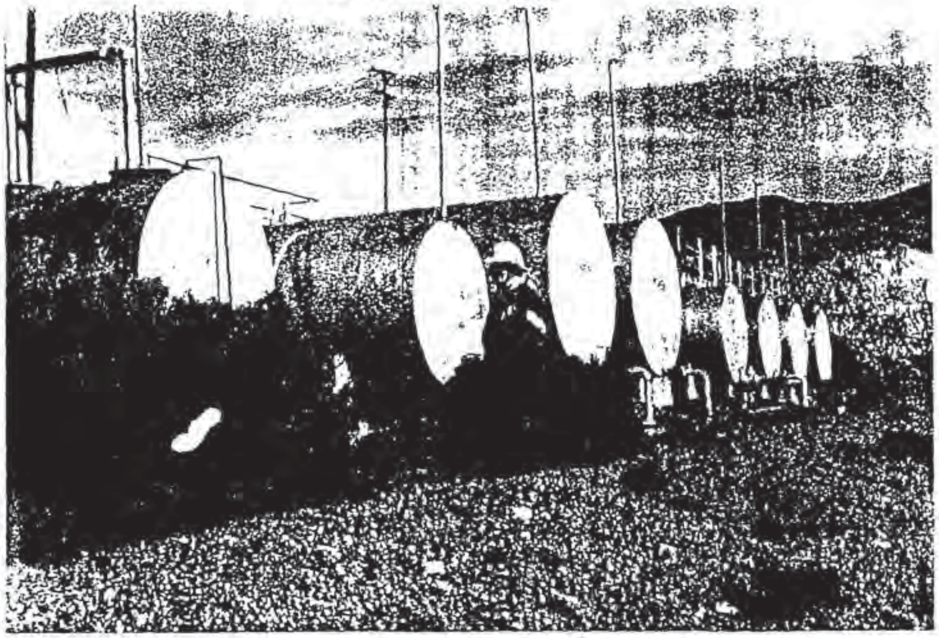


Profile of total field magnetic intensity, Burn Pit Area

FIGURE 4

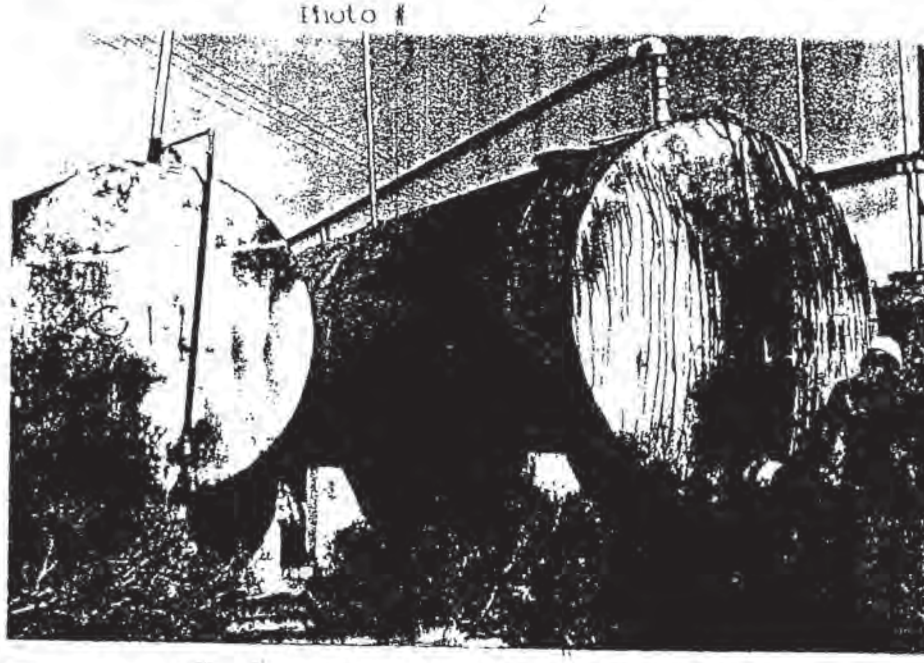
ATTACHMENT 8

Photo # 1



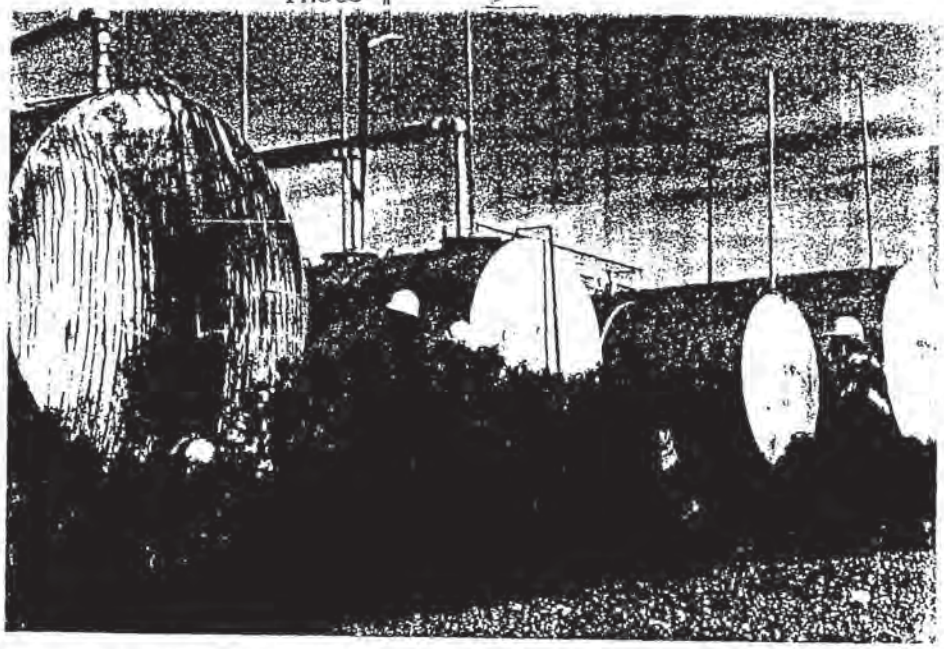
Comments:
[illegible]/94 Eagle Mountain Mine, Central Pit Fueling Station [illegible], diesel and automatic fluid storage tanks. All tanks [illegible] empty. Lowell Bell is observing the tanks. Photo shows [illegible] [illegible] Rich Hubbell

Photo # 2



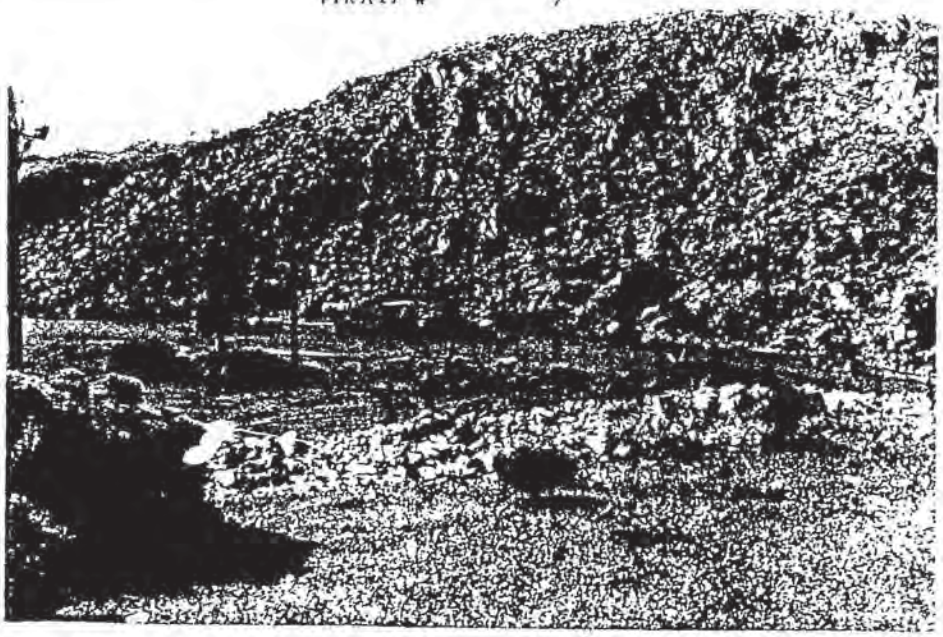
Comments:
[illegible] Eagle Mountain Mine Central Pit Fueling Station. Oil [illegible] tanks which are empty [illegible] tanks. Chris Greene [illegible] the ground around the tanks for signs of contamination. [illegible] Rich Hubbell

Photo # 3



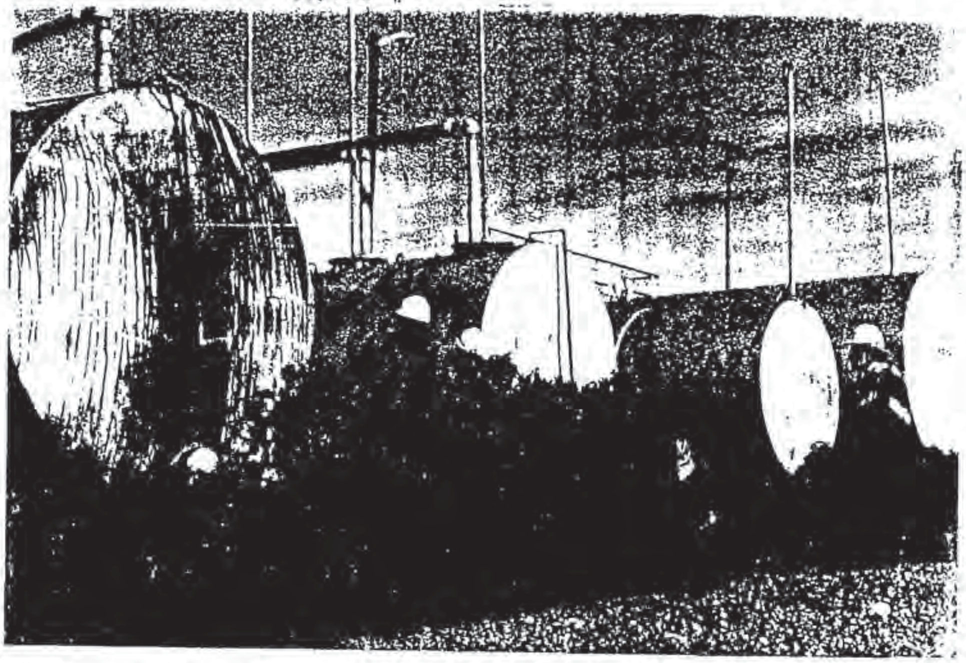
Comments:
Detail Eagle Mountain Mine Central Pit Fueling Station equipment, diesel and hydraulic fluid storage tanks.

Photo # 4



Comments:
Detail Eagle Mountain Mine Central Pit Fueling Station. Spill studies in center.

Photo # 3



Comments:
[illegible] Eagle Mountain Mine Central Pit Fueling Station [illegible] diesel and hydraulic fluid storage tanks.

Photo # 4

Comments:
[illegible] Eagle Mountain Mine Central Pit Fueling Station [illegible] station [illegible]